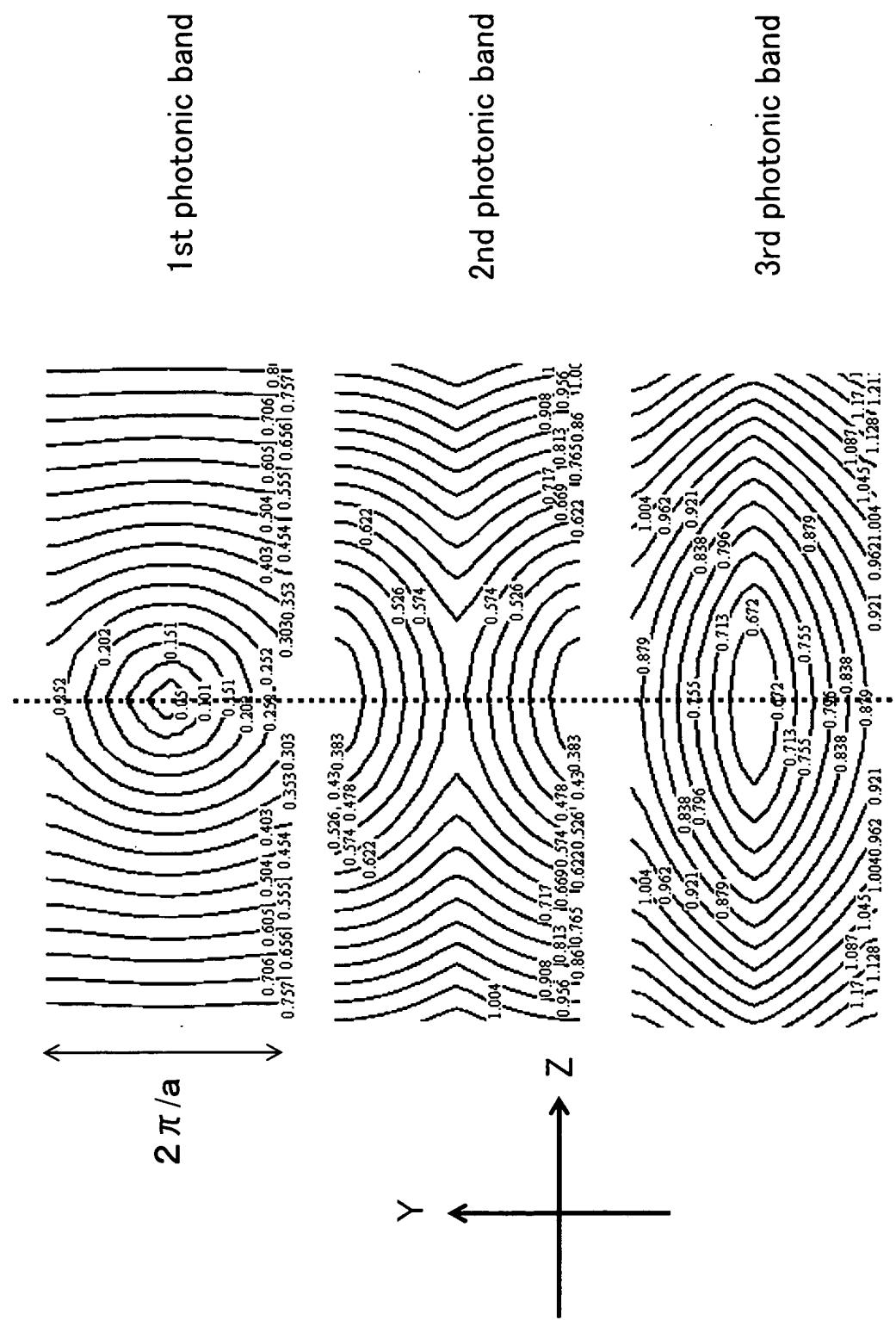
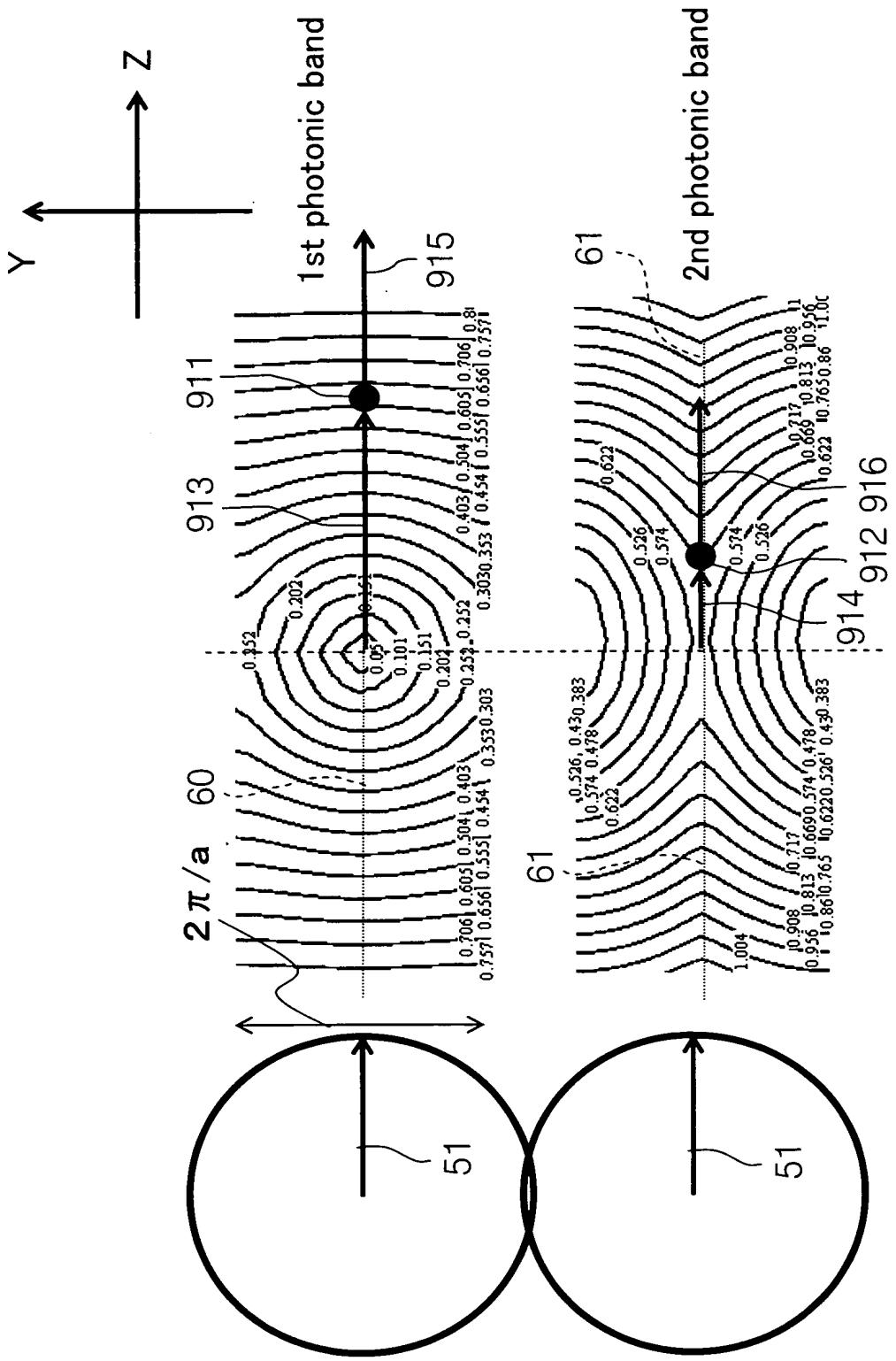


Fig. 1

Fig. 2





3
Fig.

Fig.4

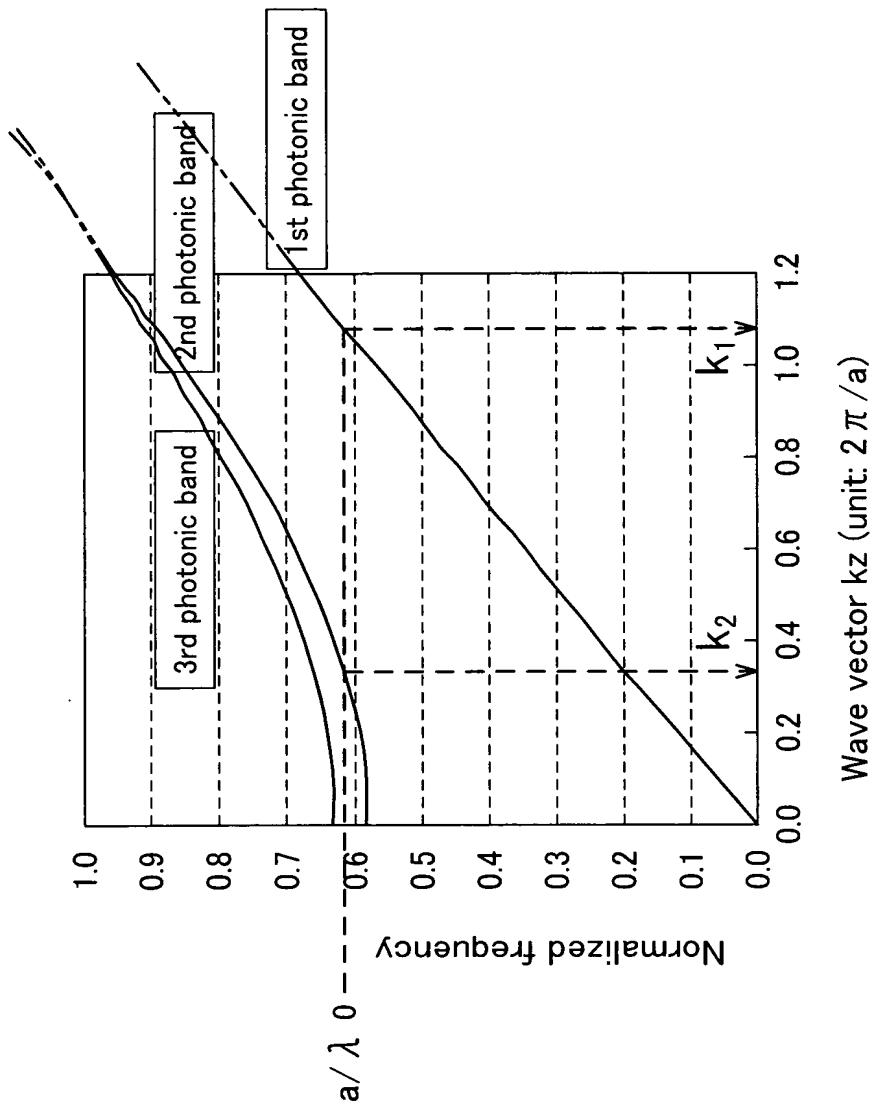


Fig. 5

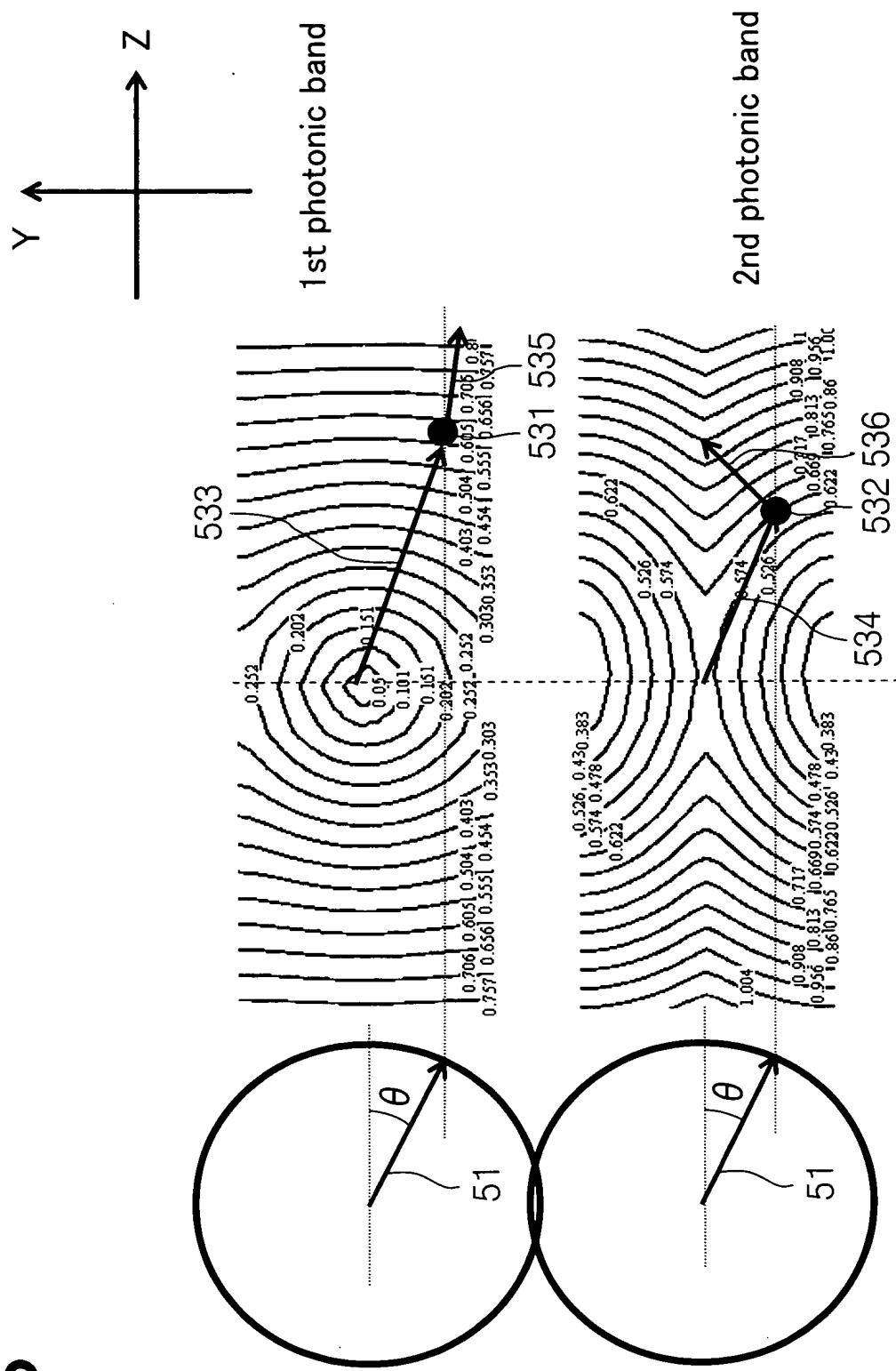


Fig. 6

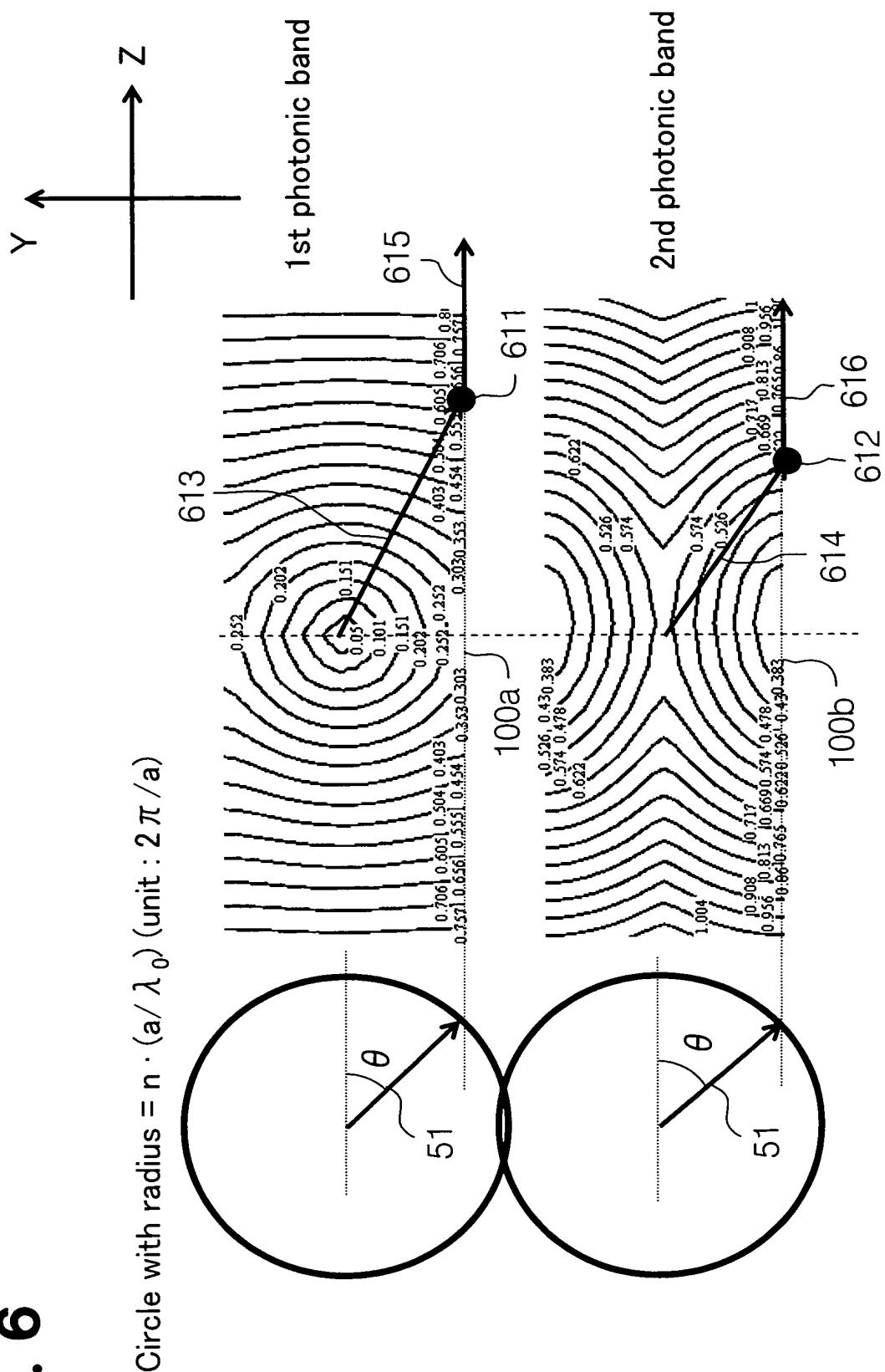


Fig.7

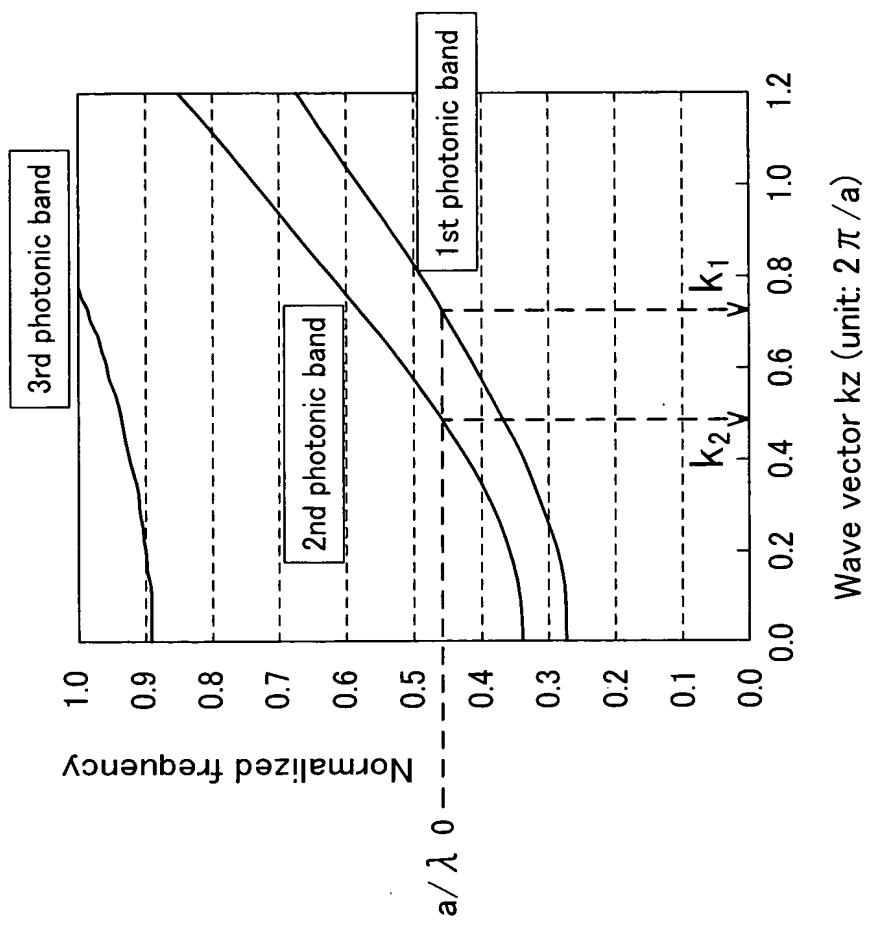
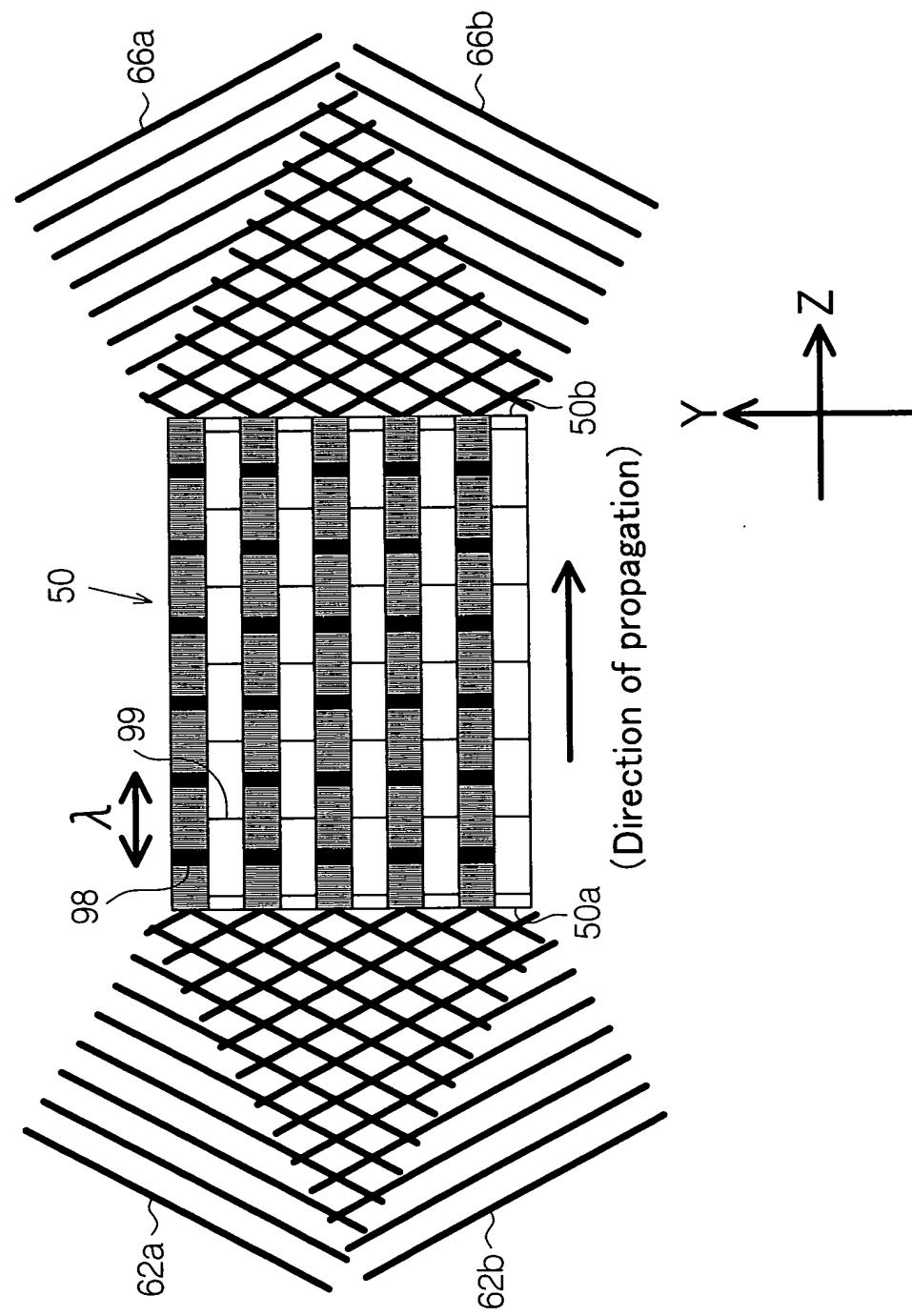


Fig.8



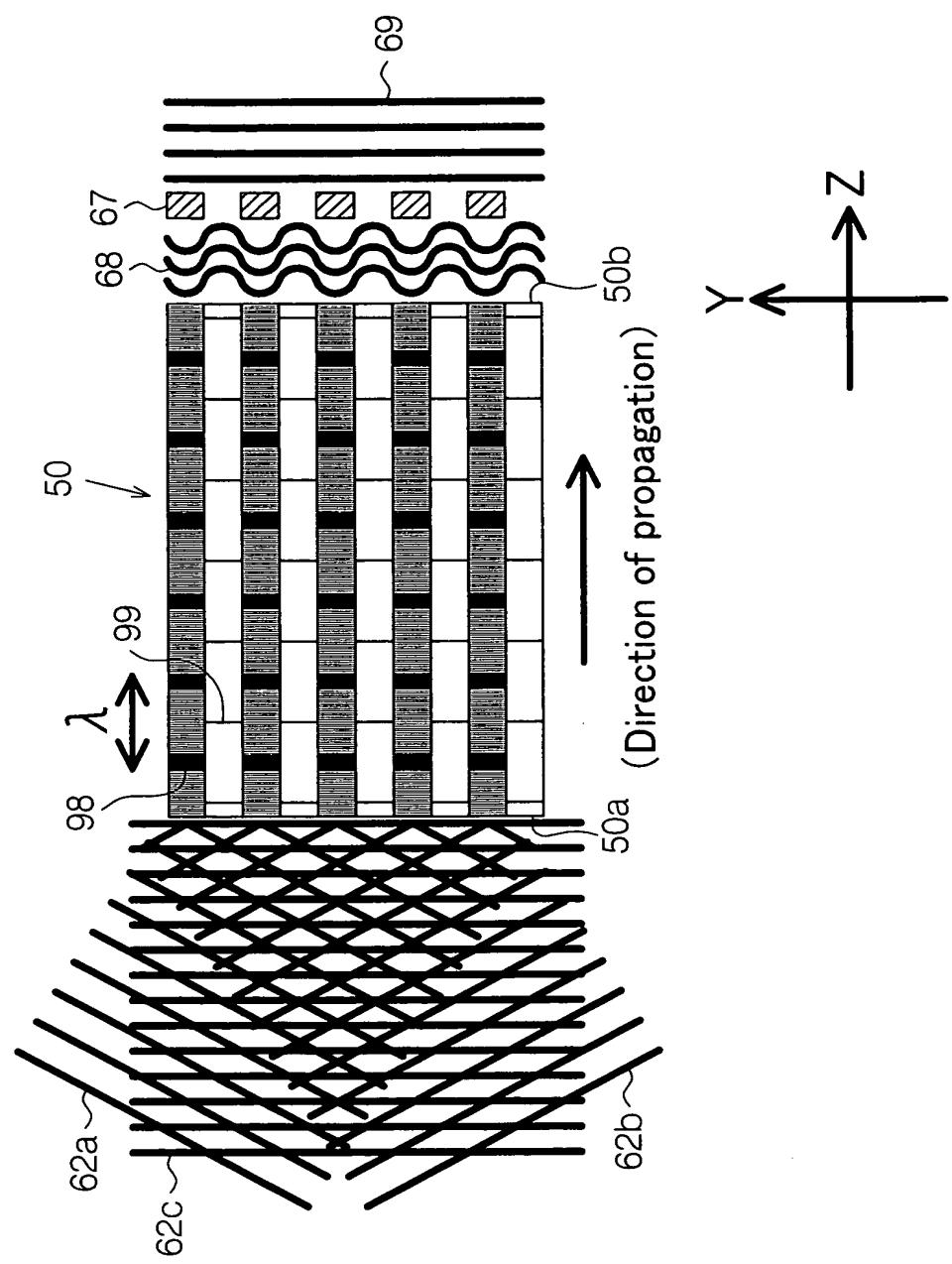


Fig.9

Fig. 10

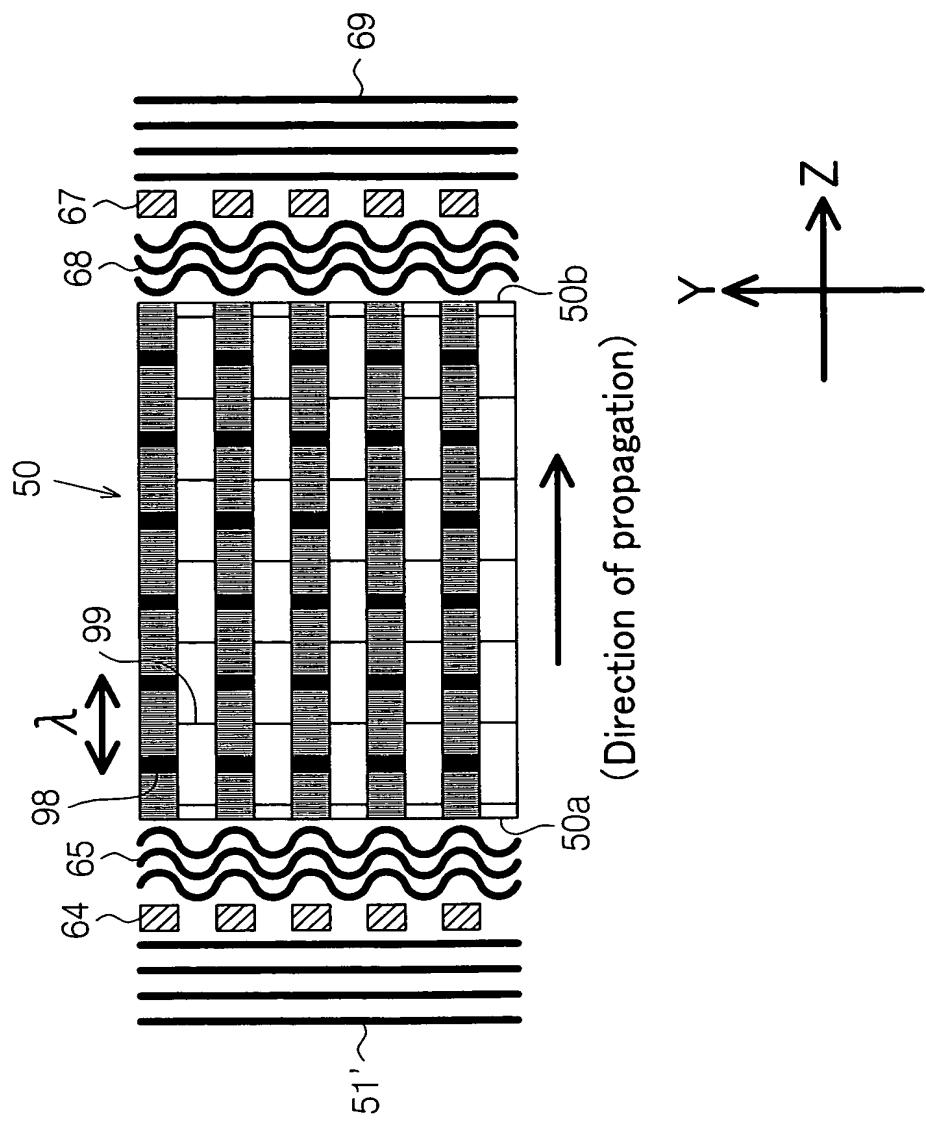


Fig.11

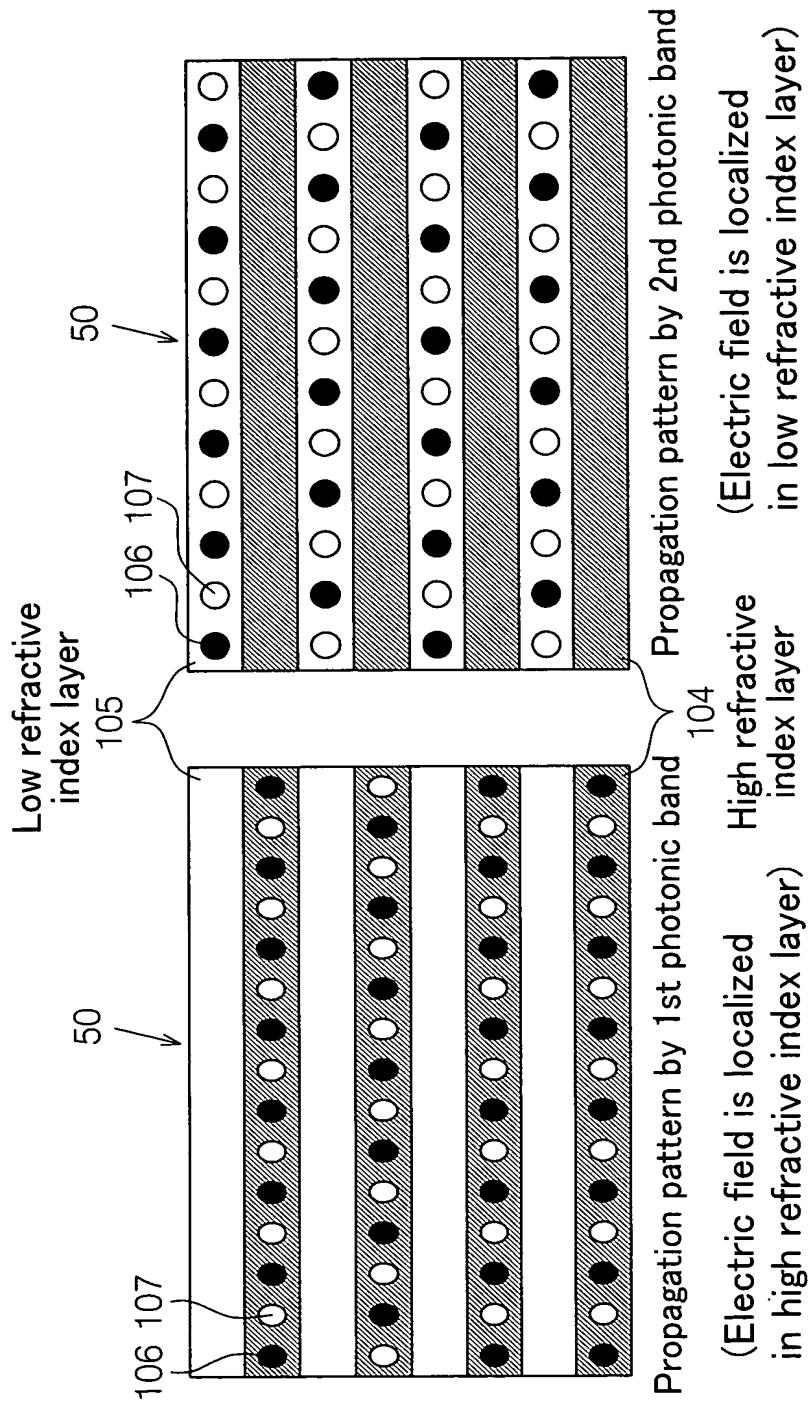
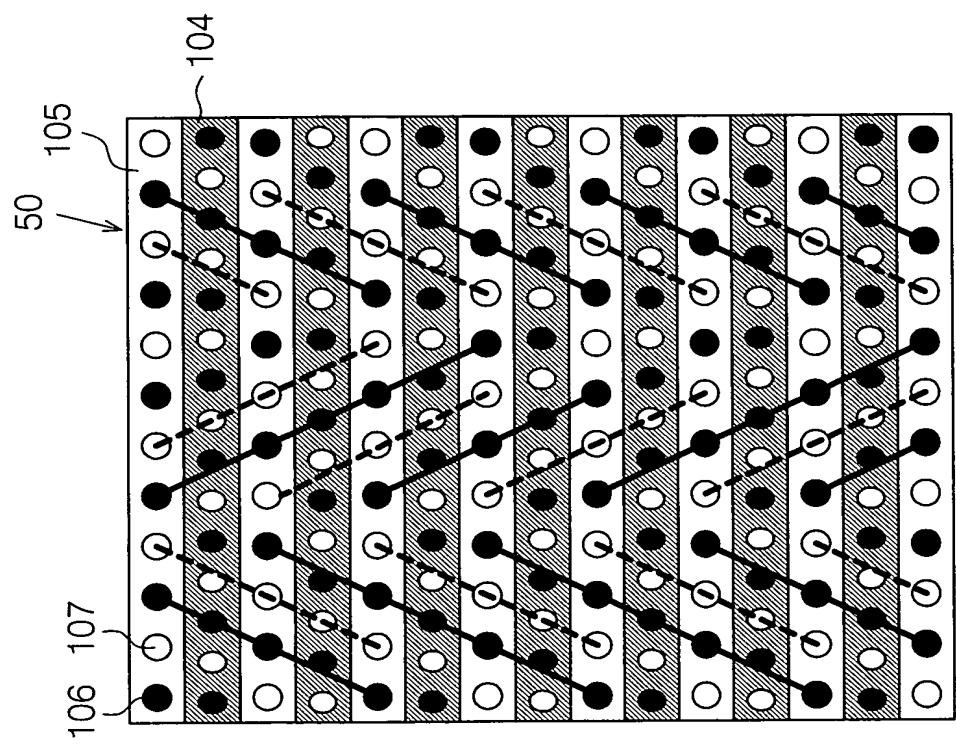


Fig.12



Propagation pattern by 1st and 2nd photonic bands

Fig. 13

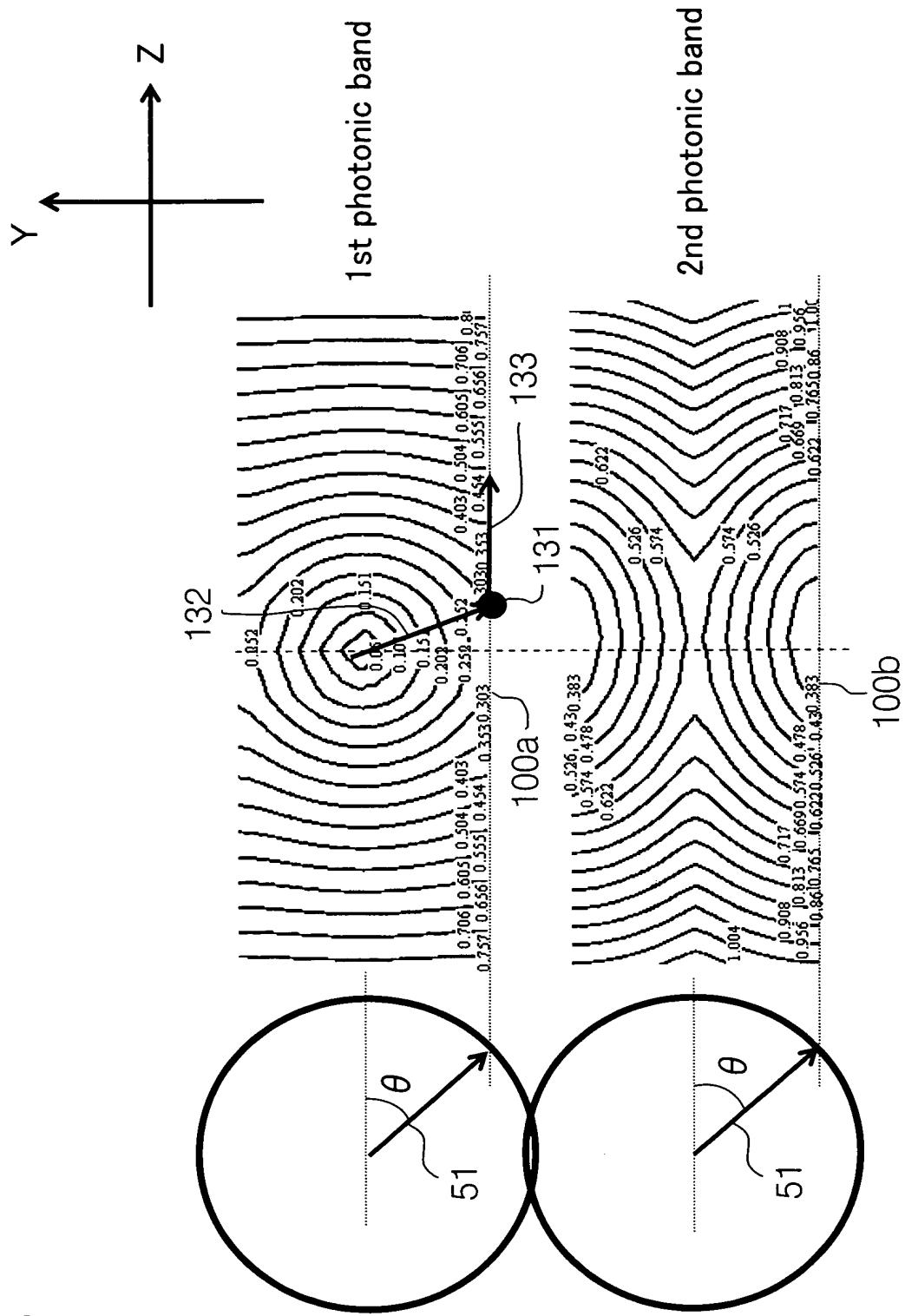
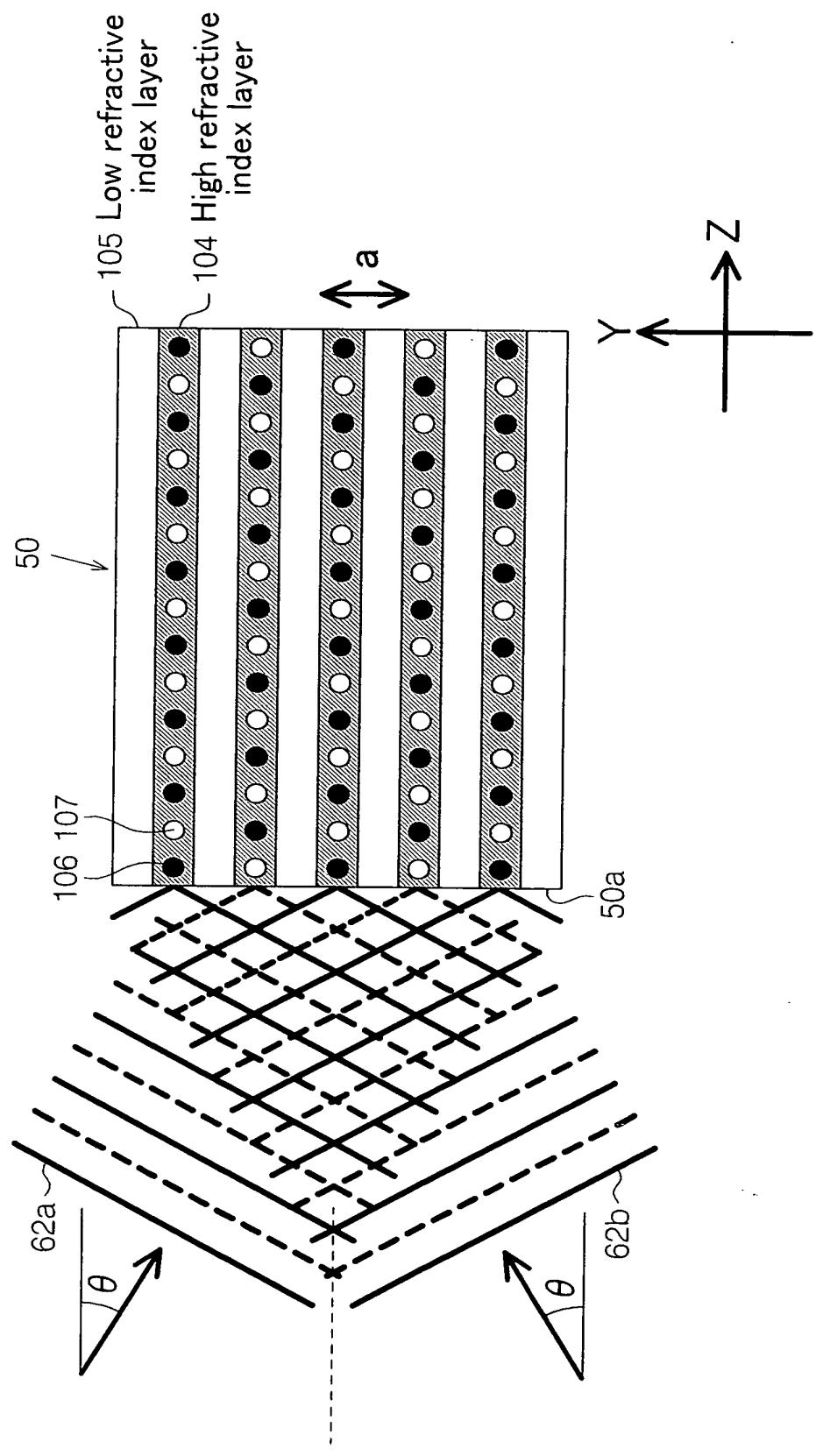


Fig. 14



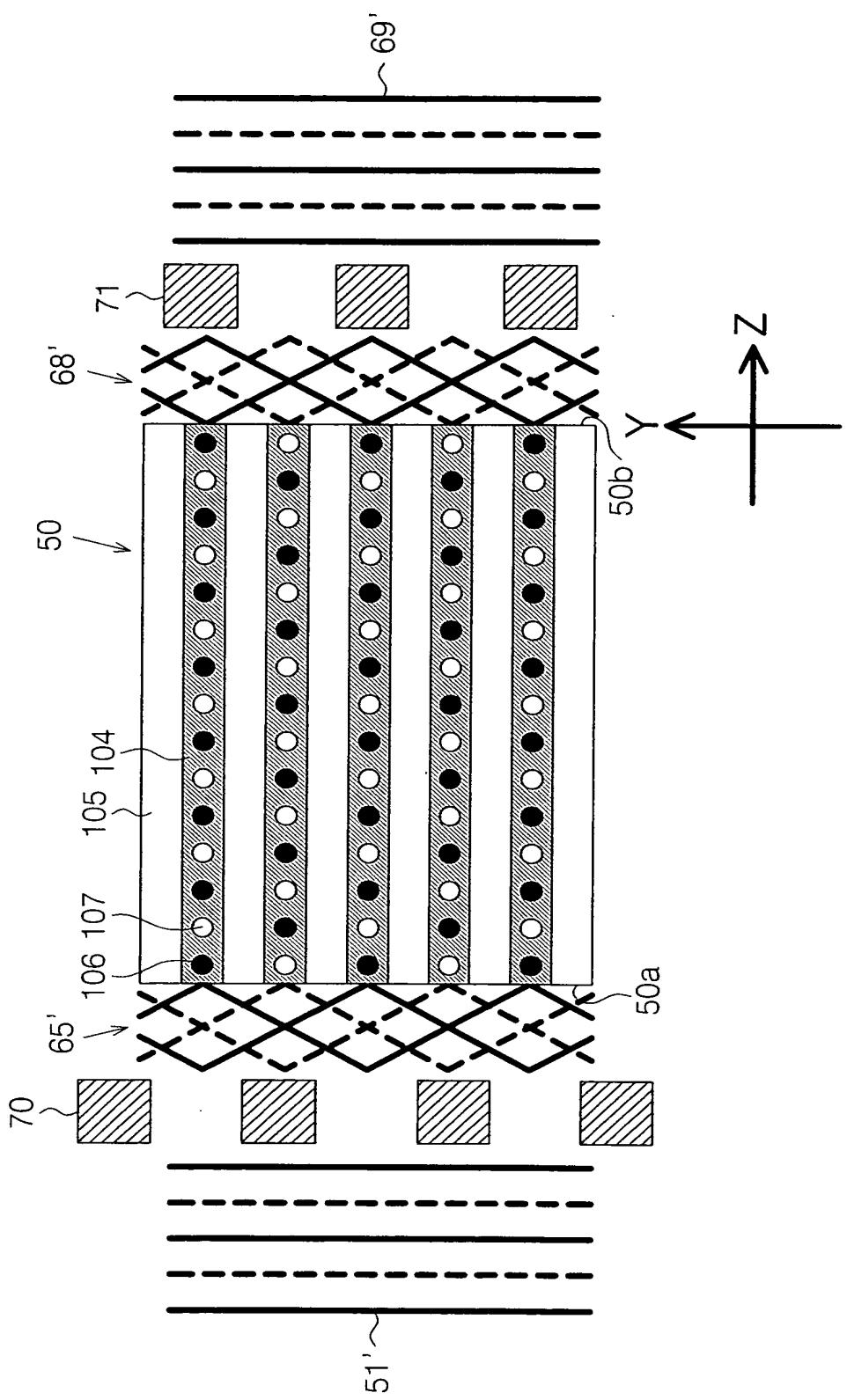


Fig. 15

Fig. 16

Directions of diffracted light depends on position
of end facet in zigzag propagation pattern.

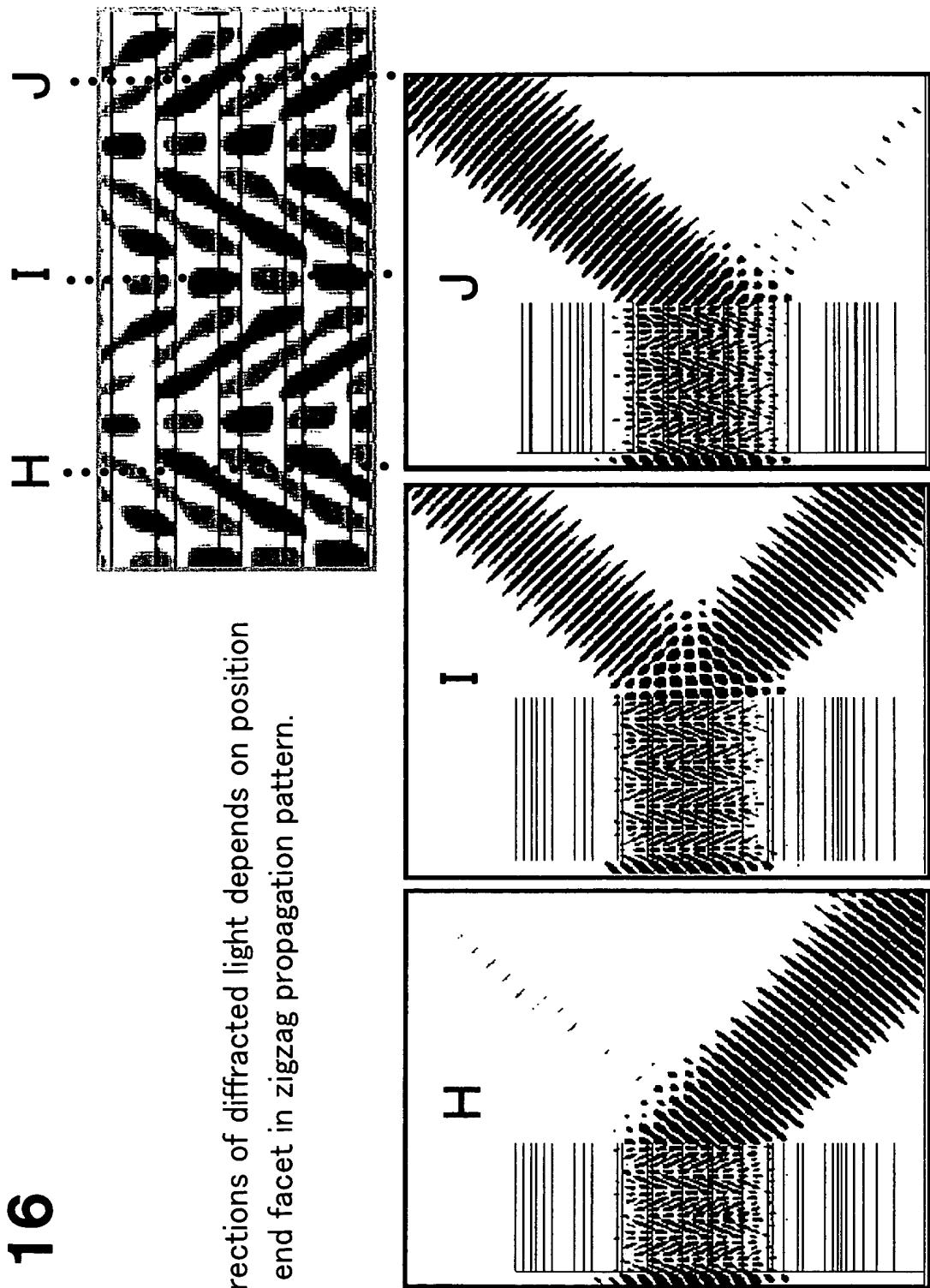


Fig. 17

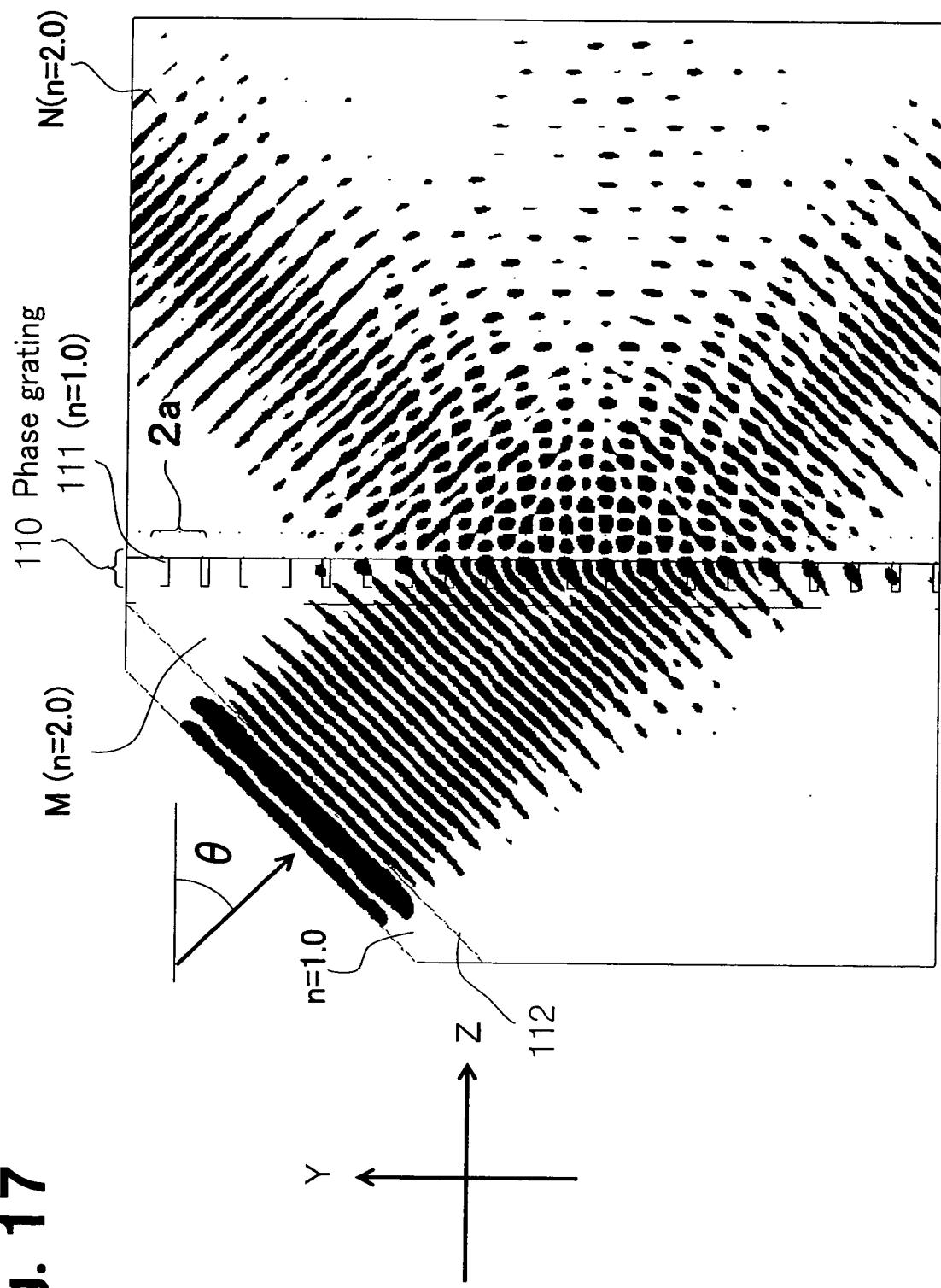


Fig. 18

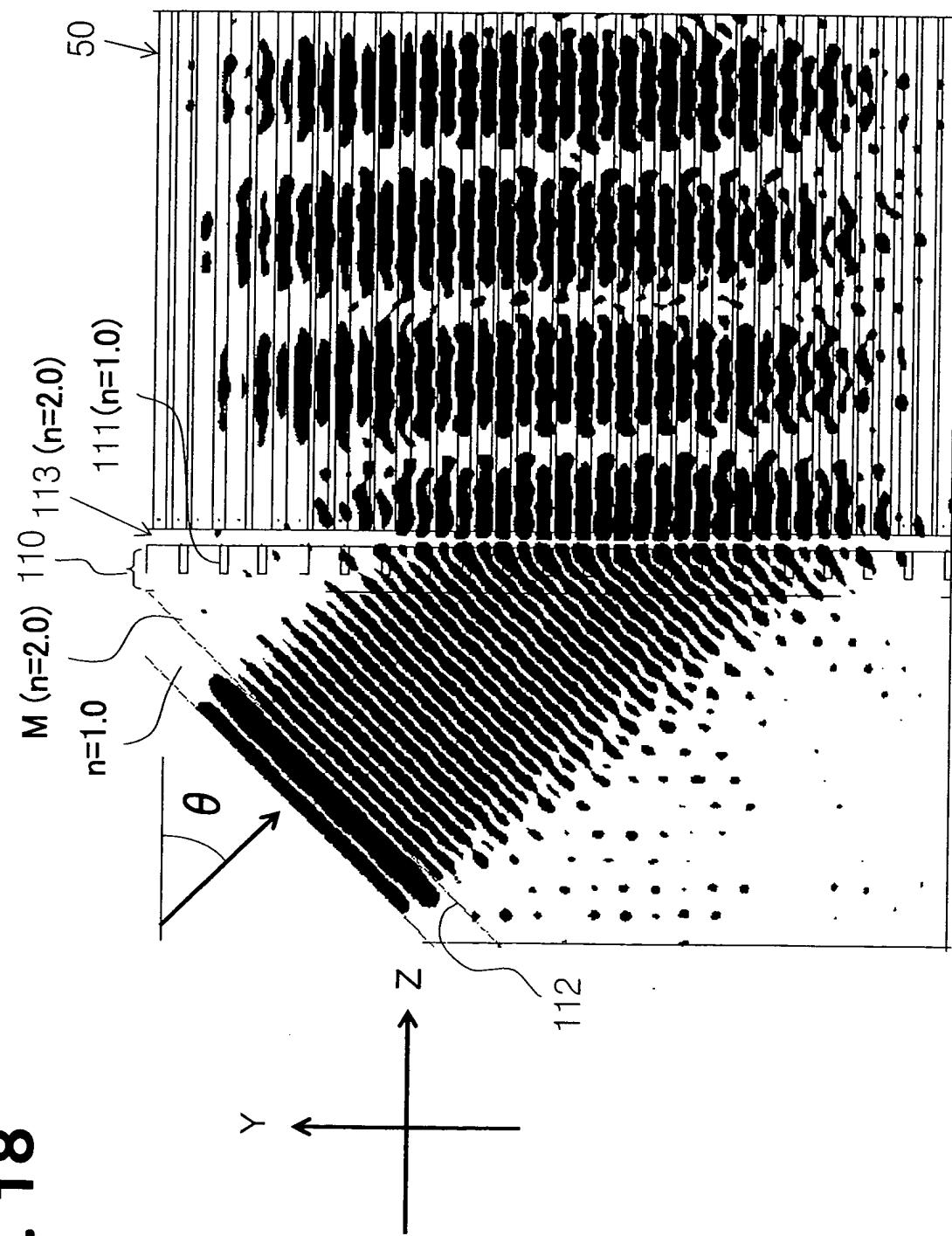


Fig. 19(a)

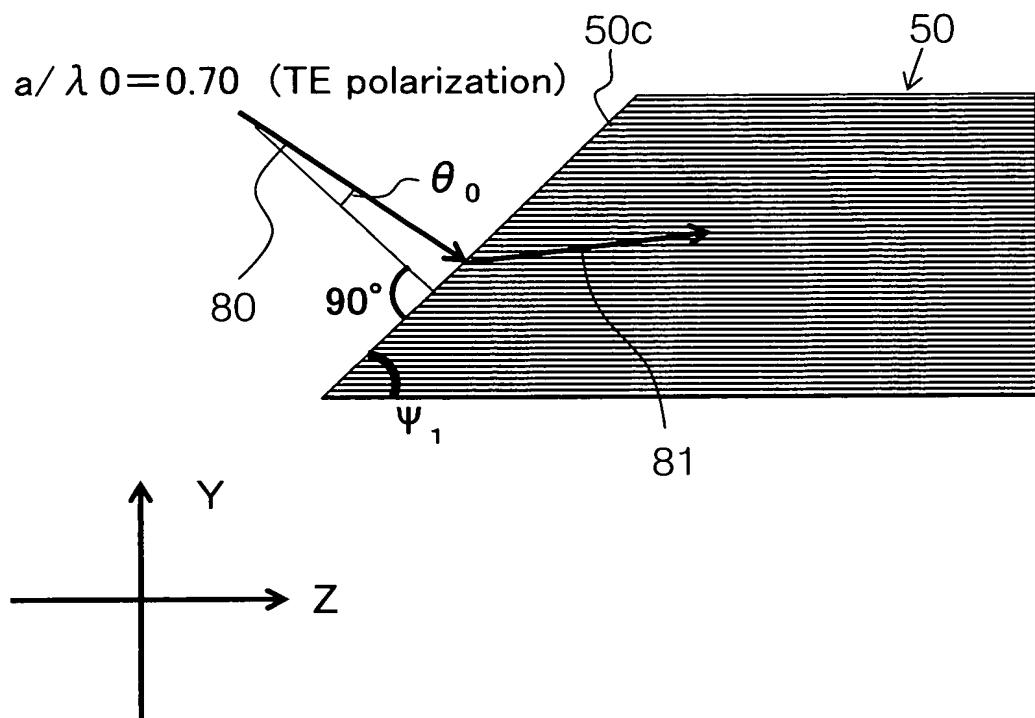


Fig. 19(b)

(Circle with radius of 0.70)

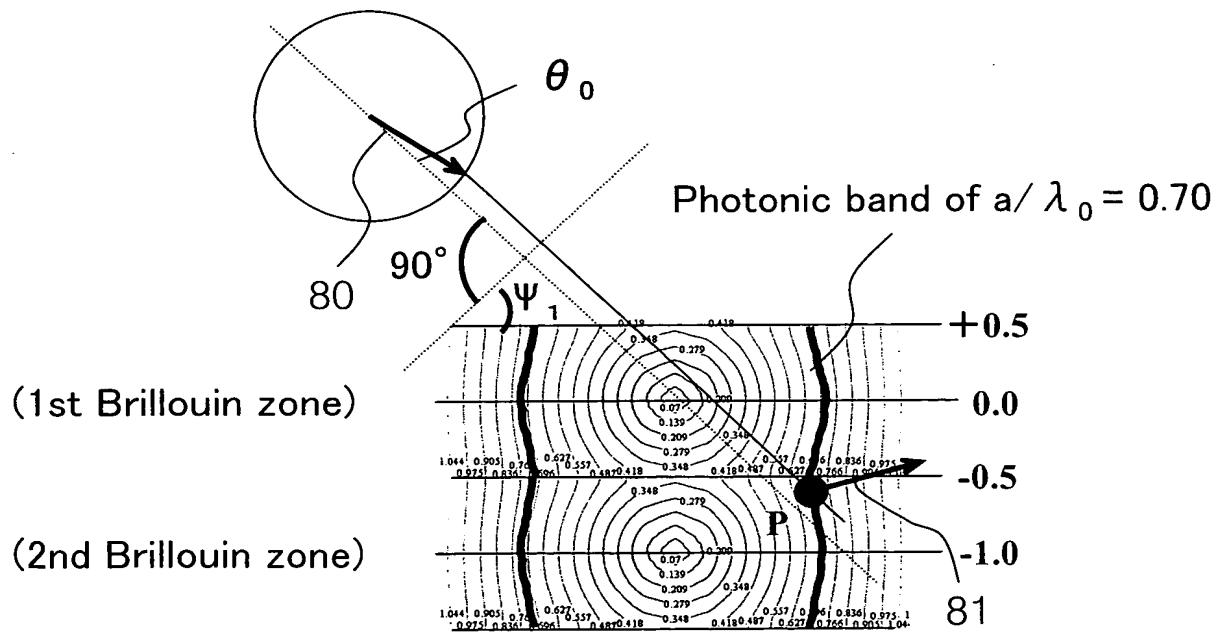
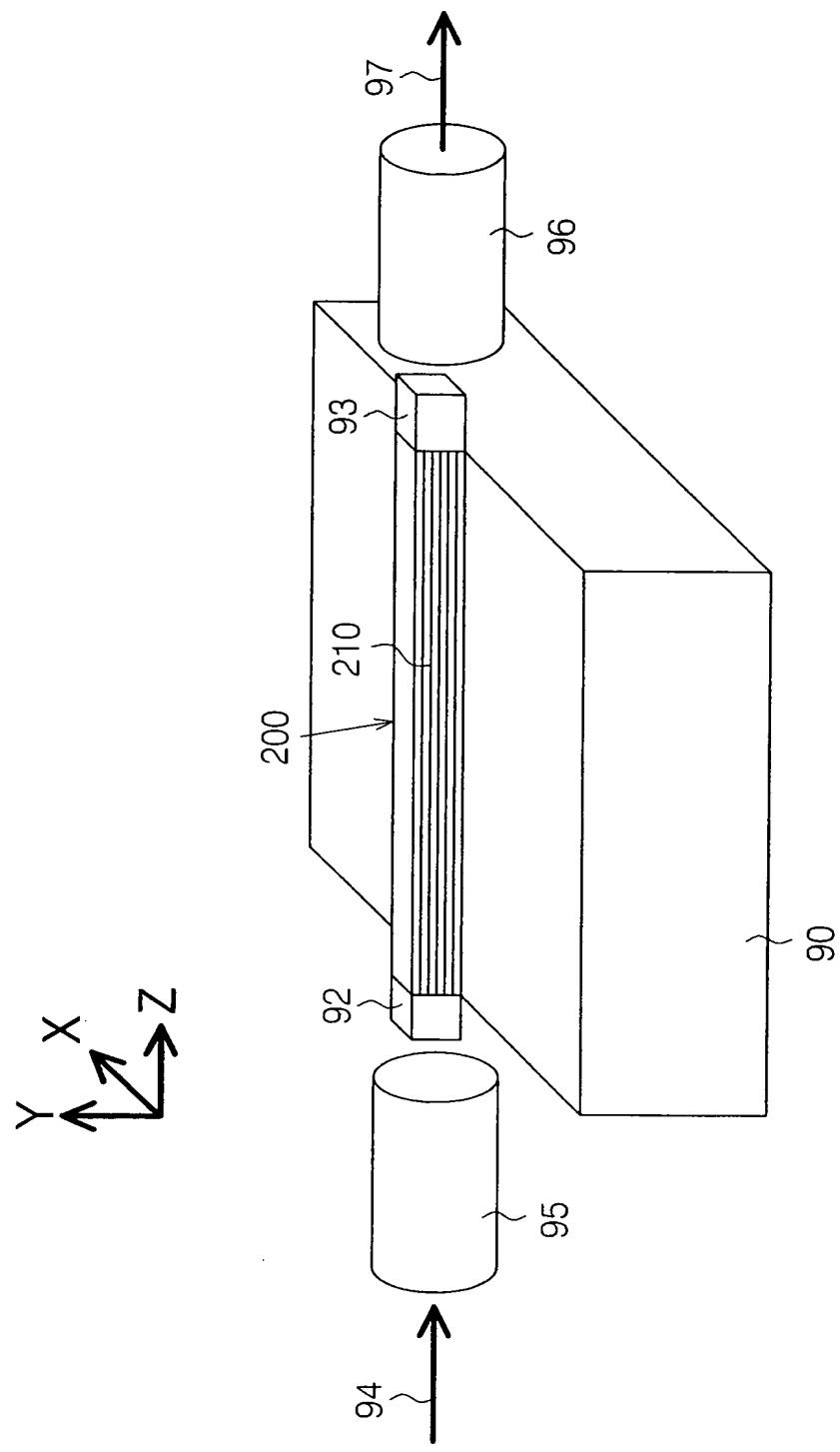


Fig.20



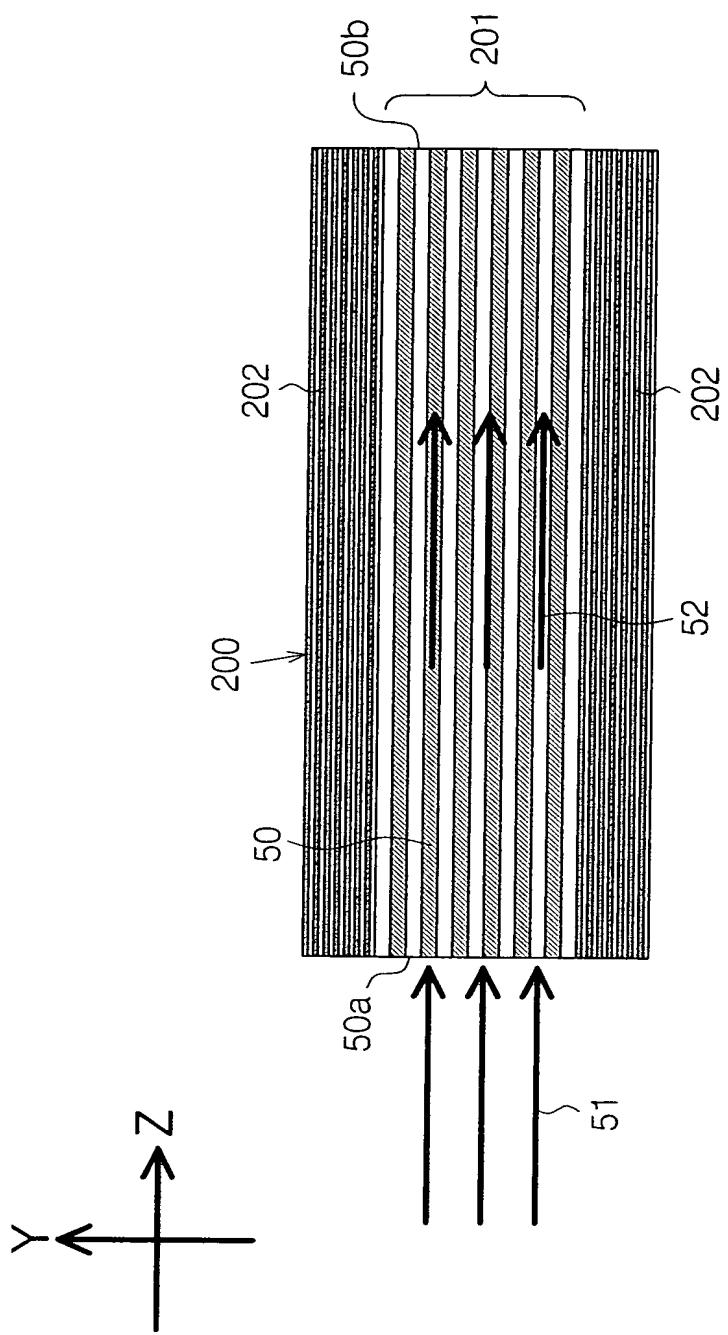


Fig.21

Fig. 22

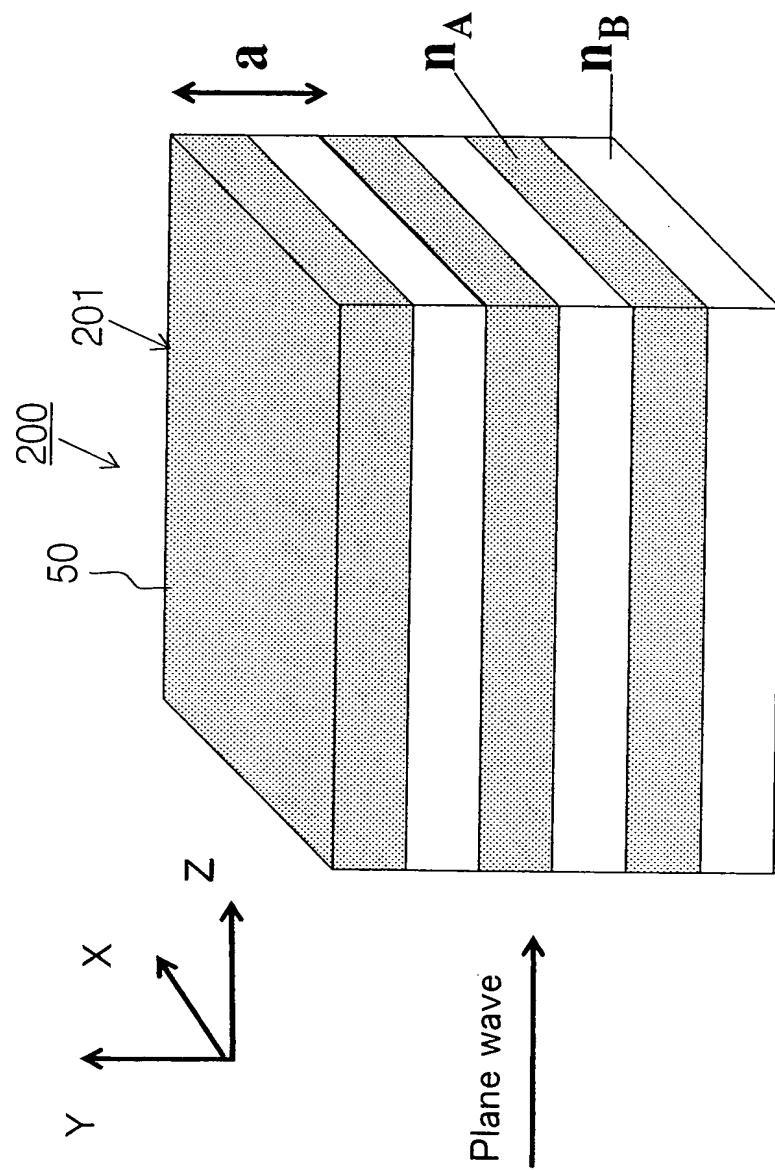


Fig. 23

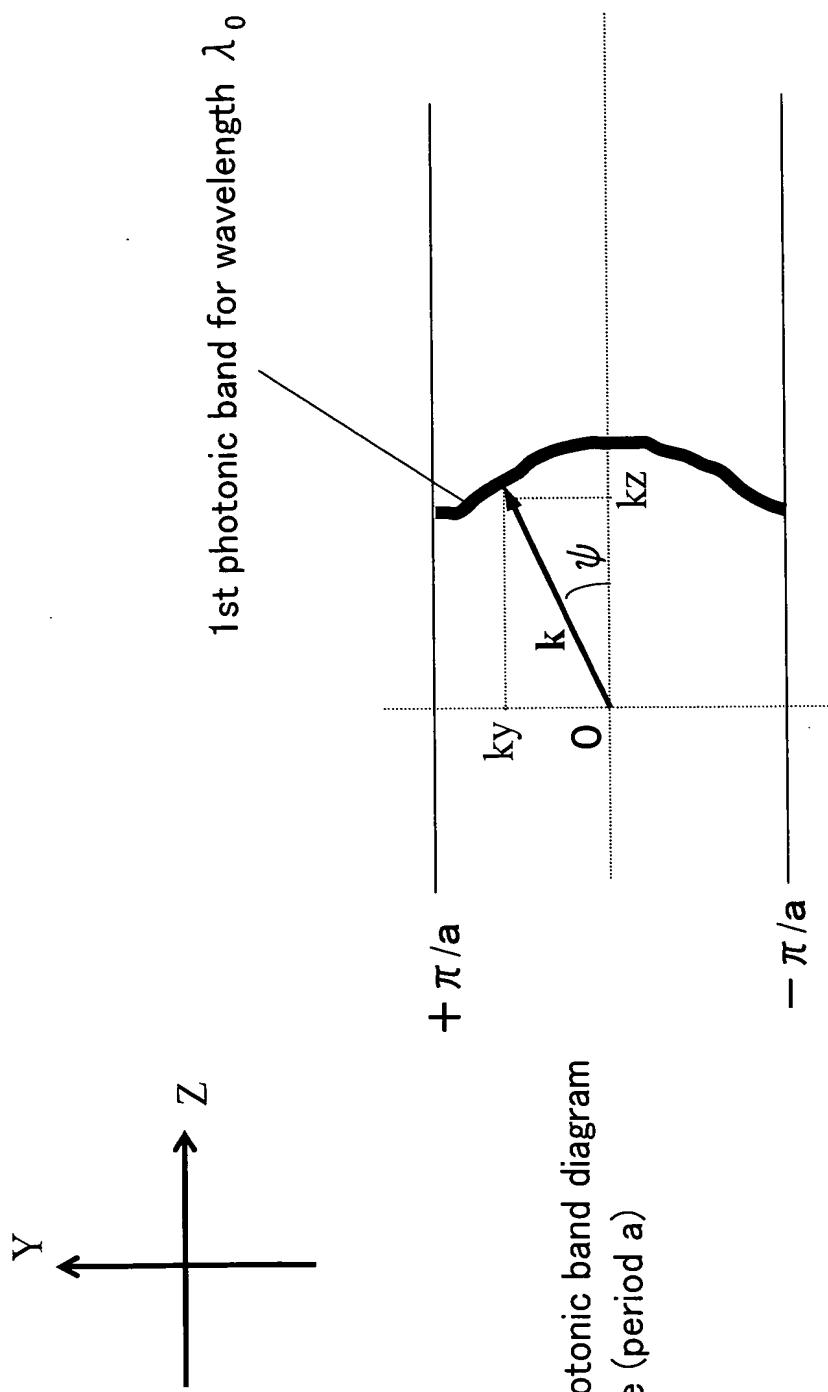


Fig. 24

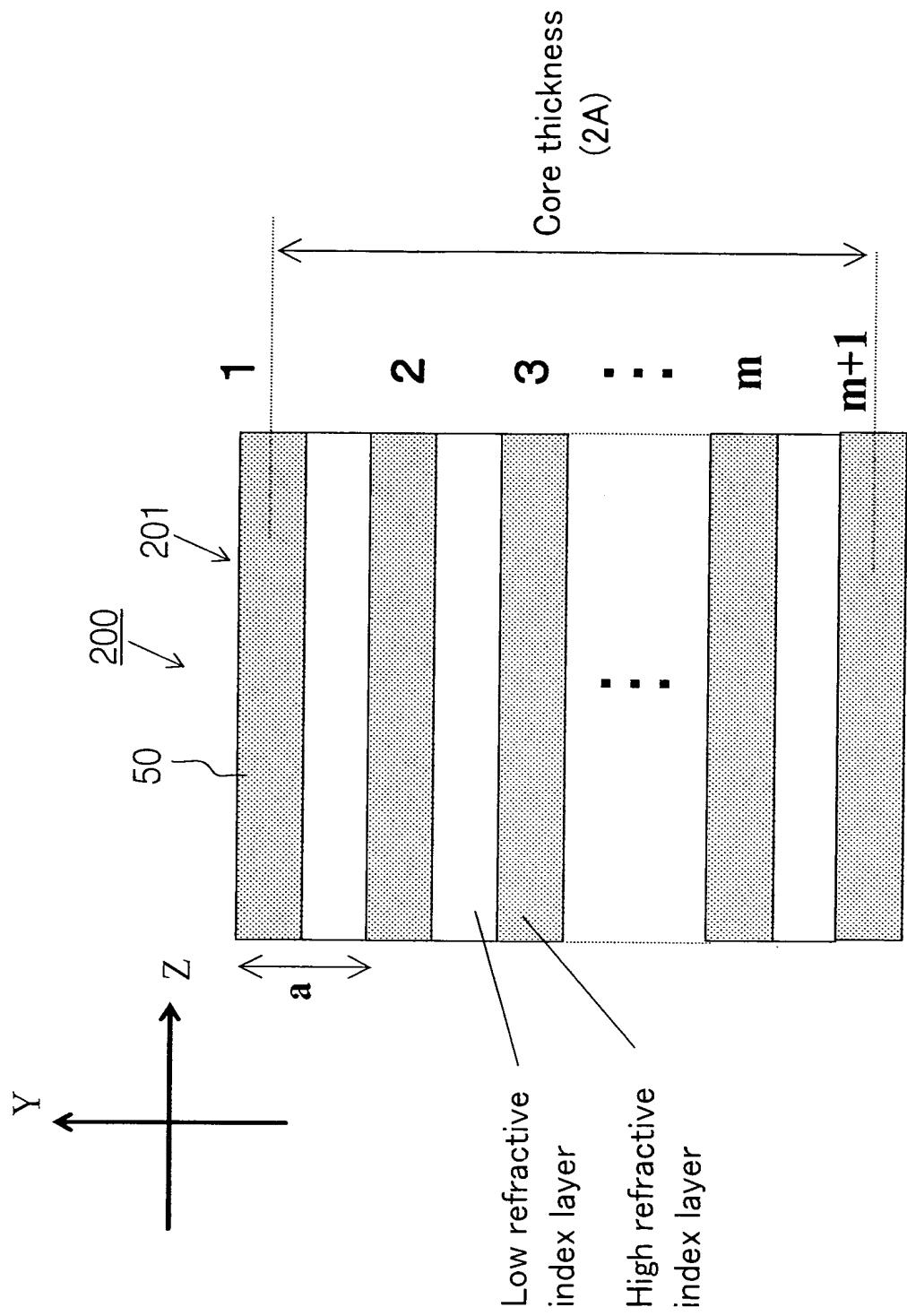


Fig. 25

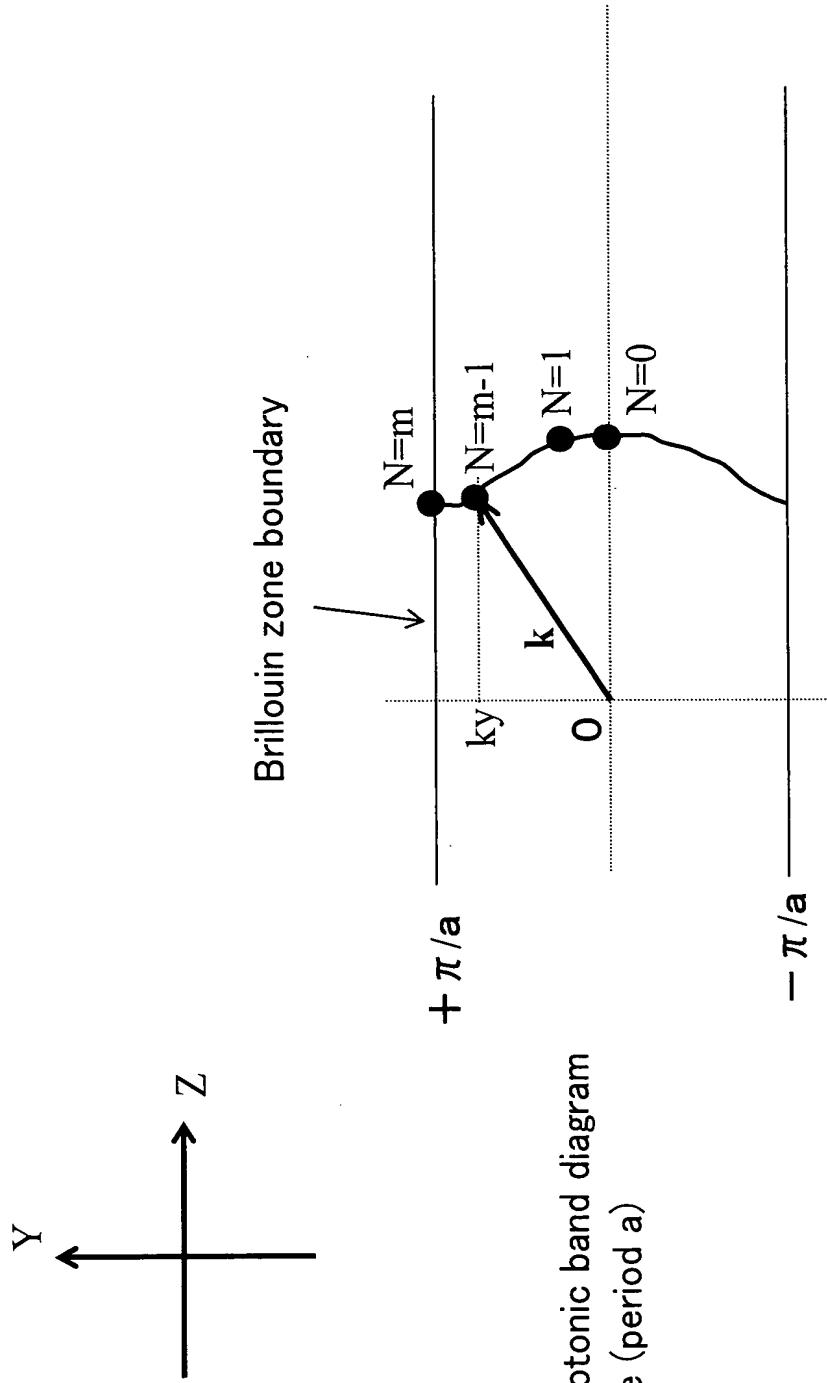


Fig. 26

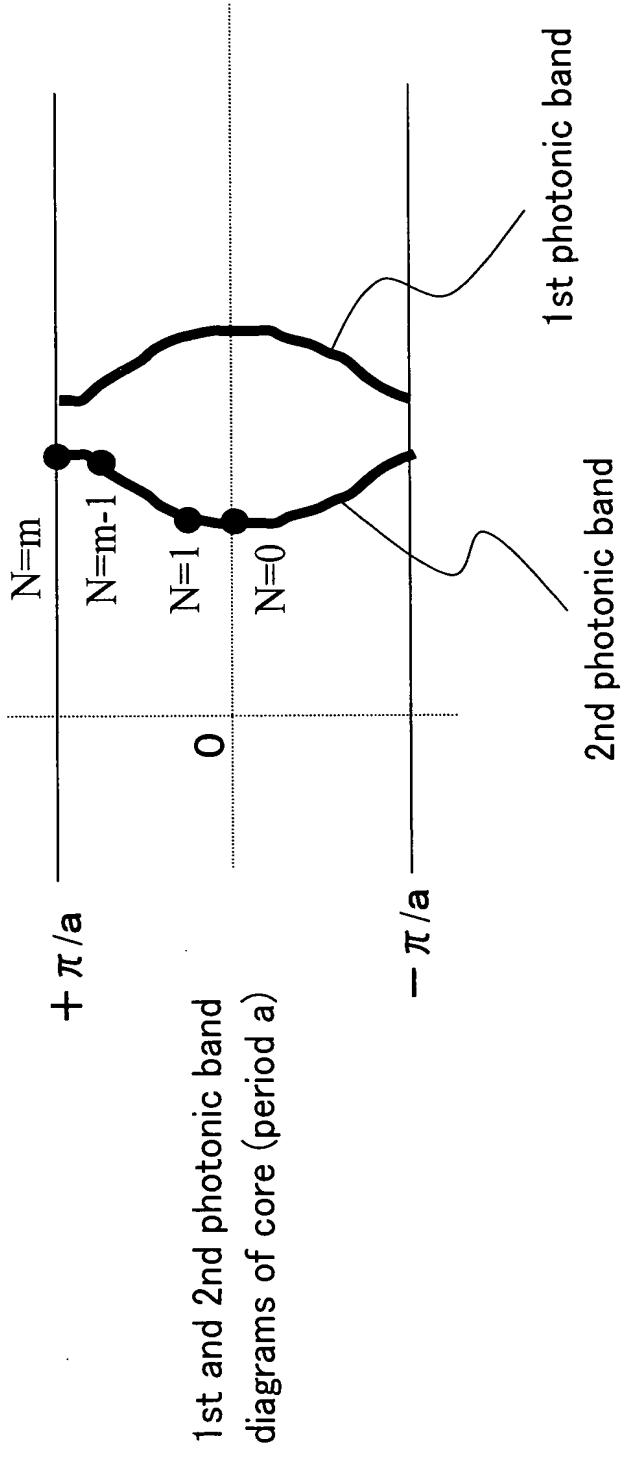


Fig. 27

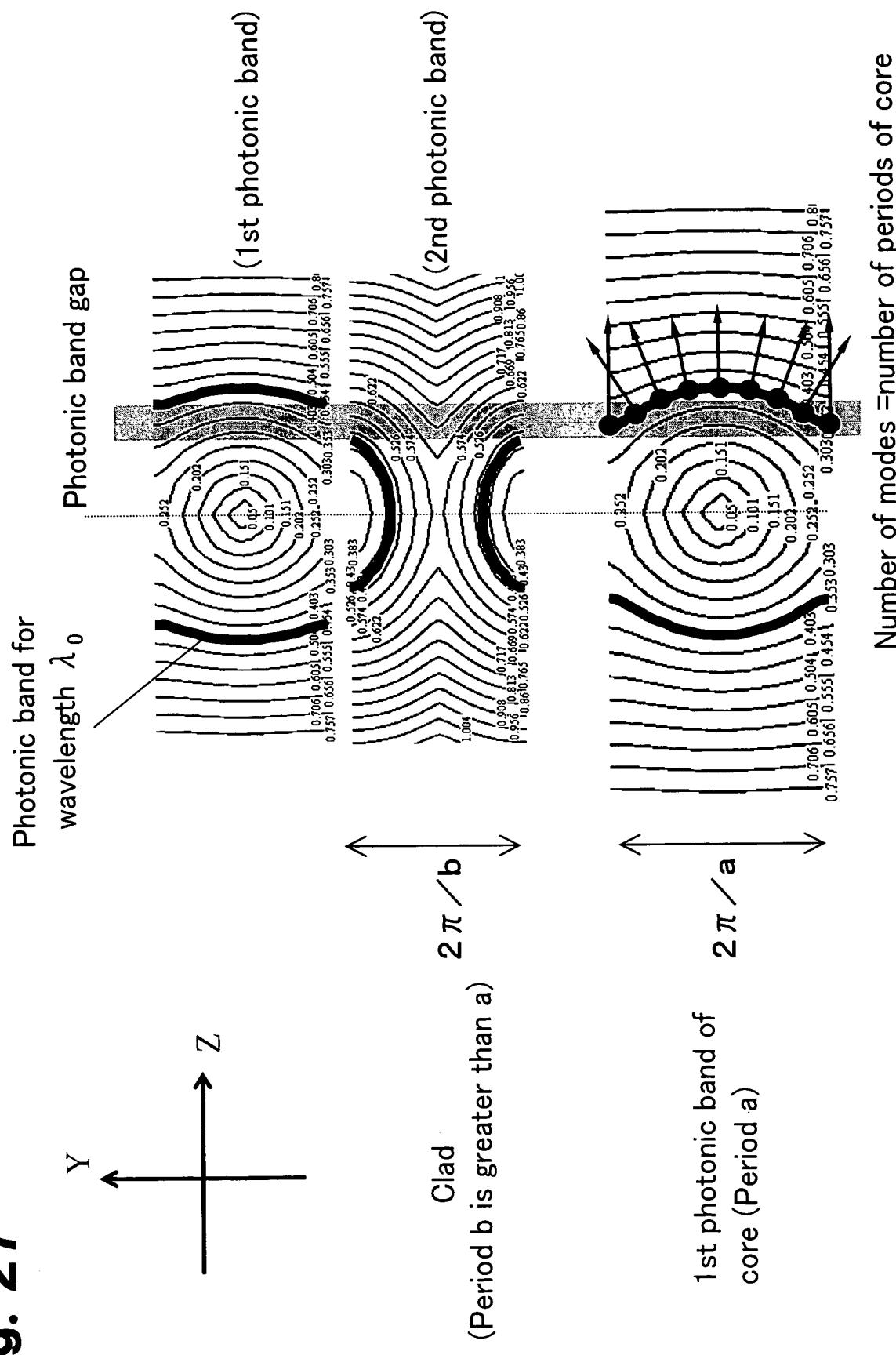


Fig. 28

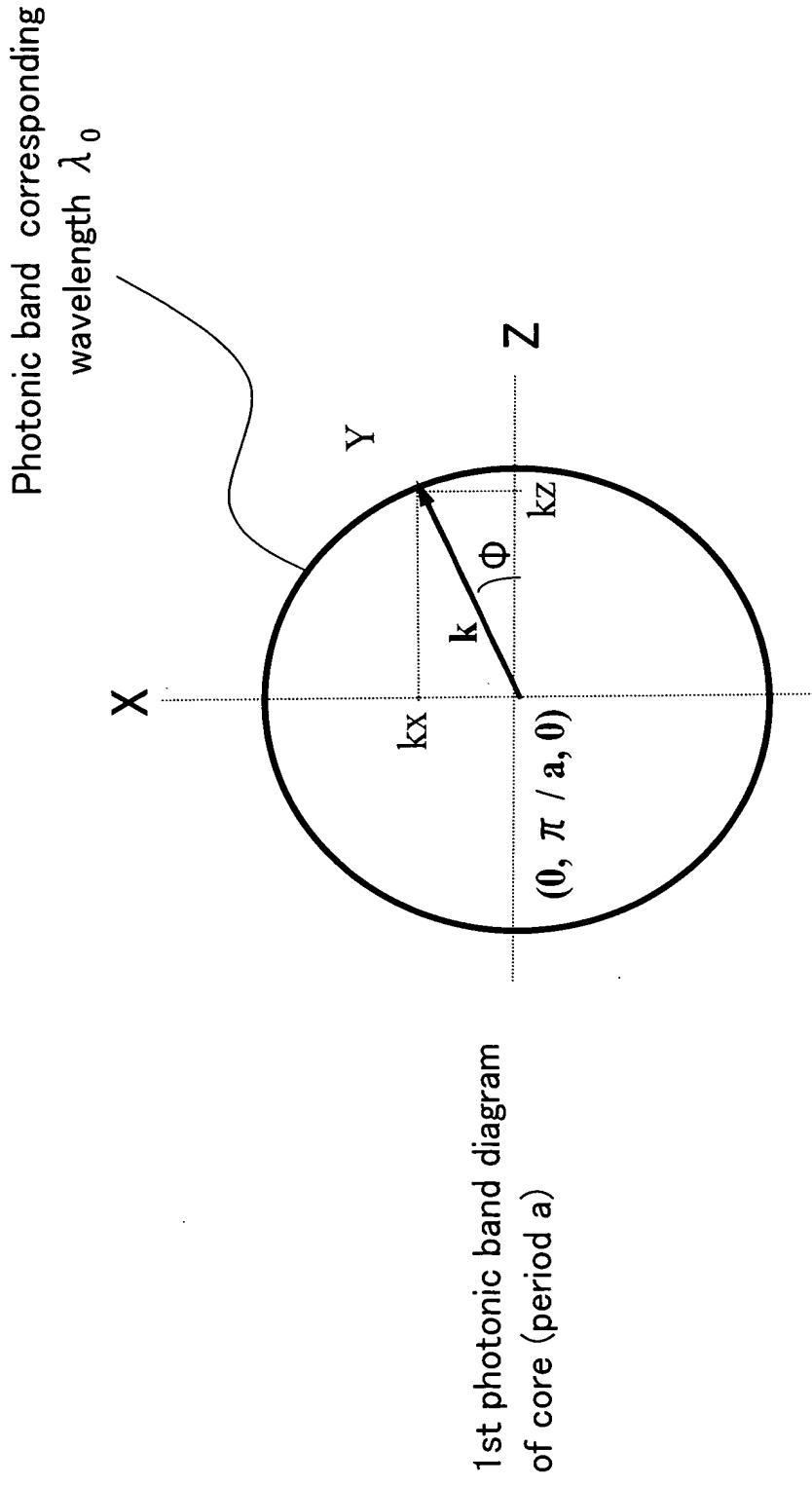


Fig. 29

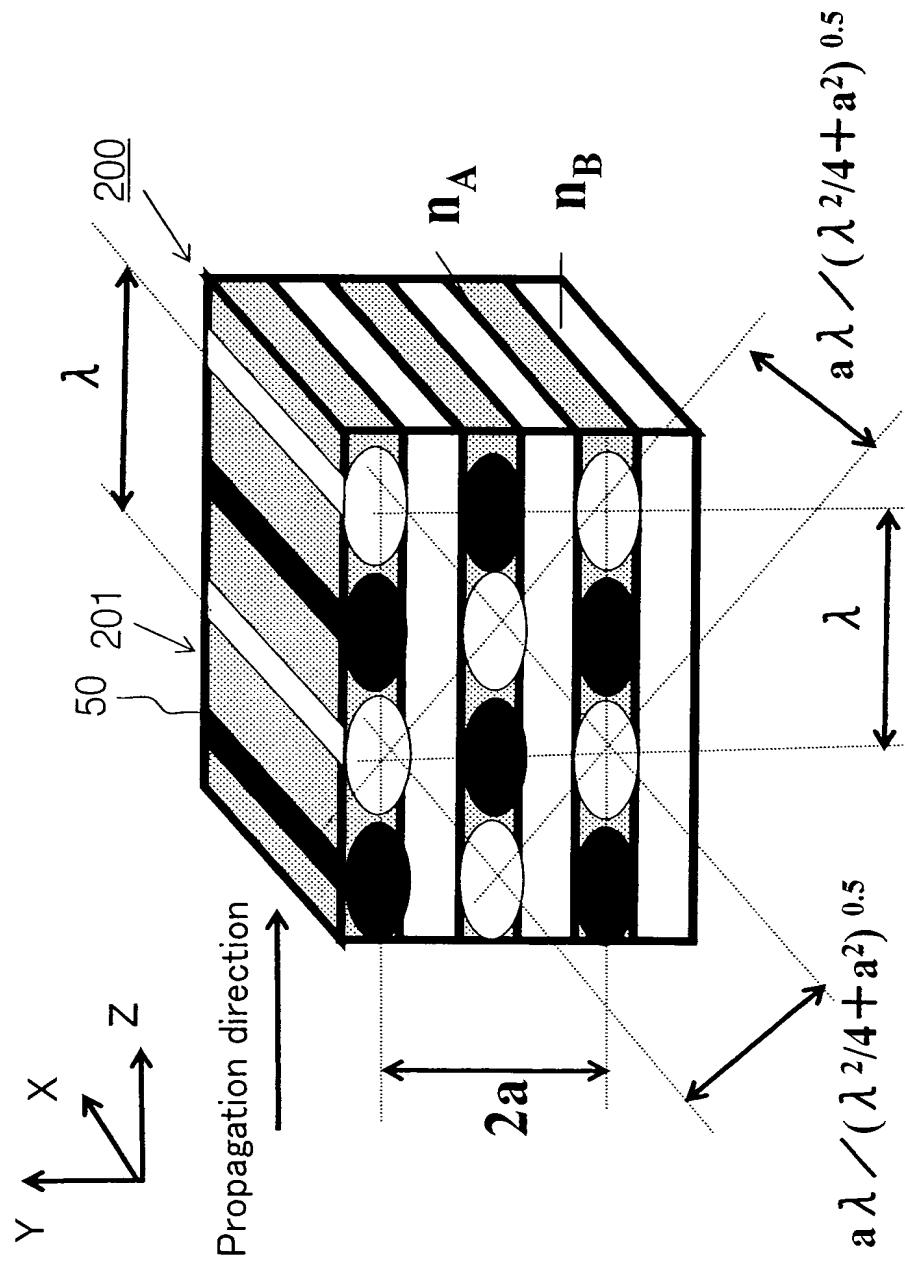


Fig. 30

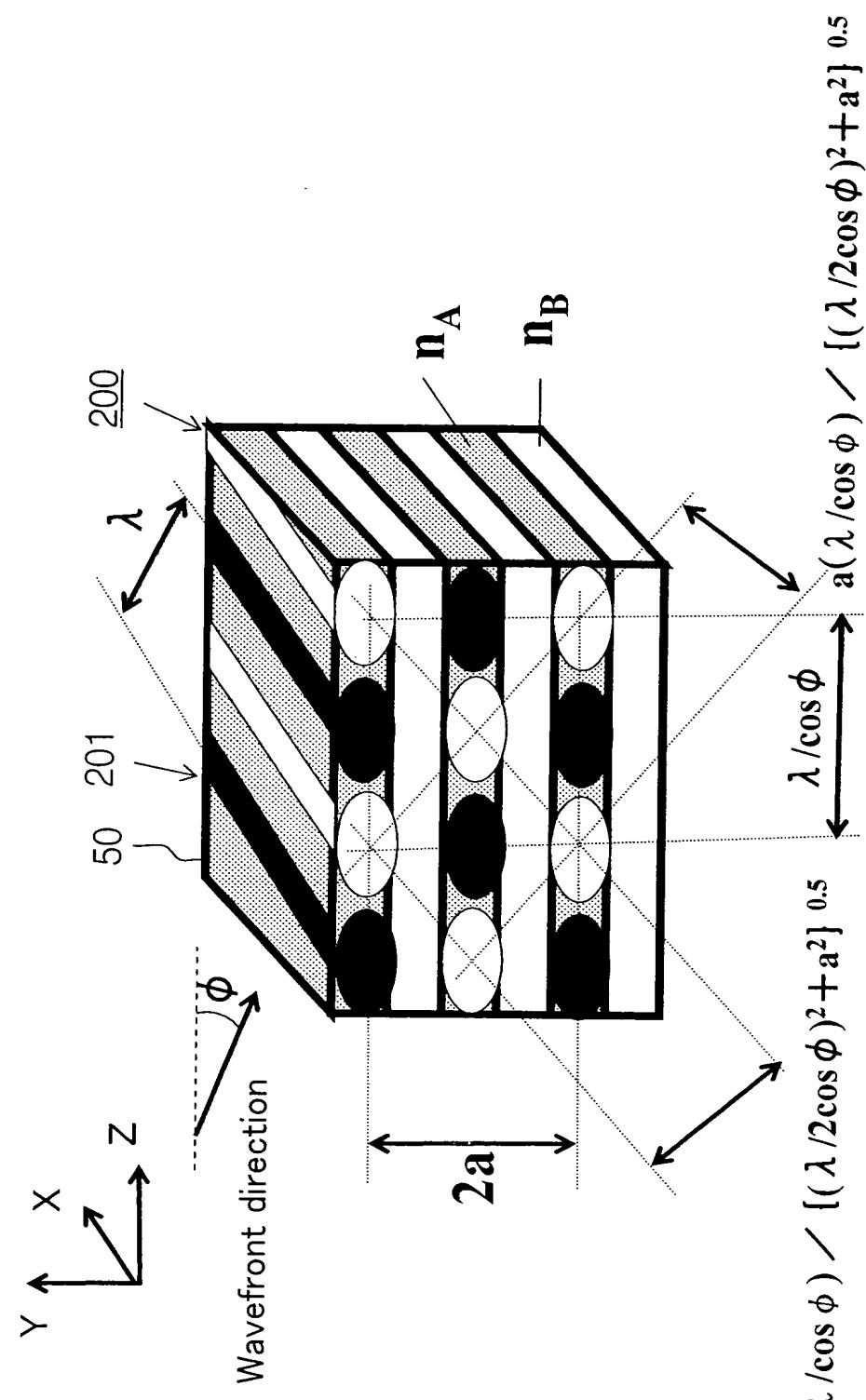


Fig. 31

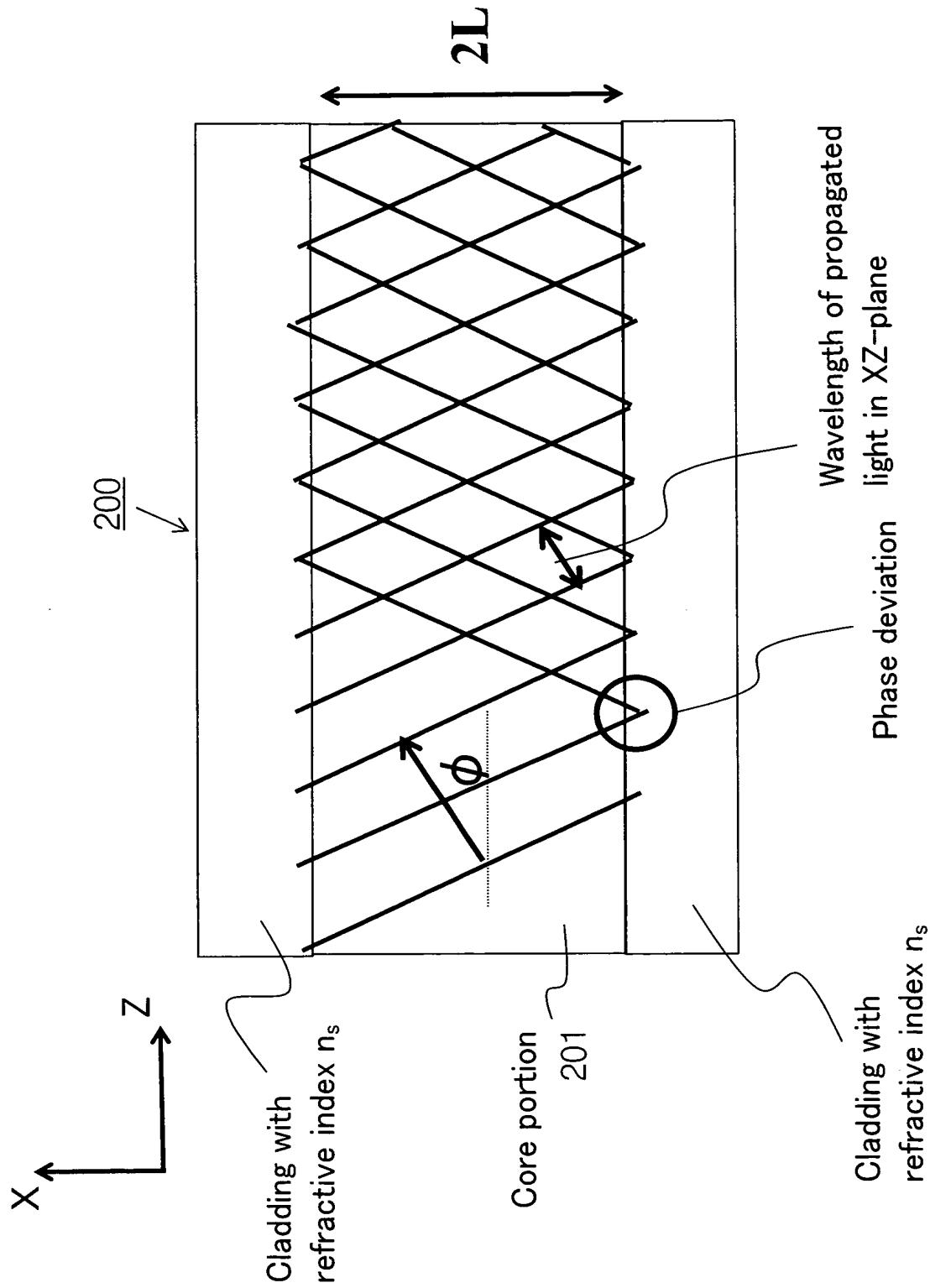


Fig. 32

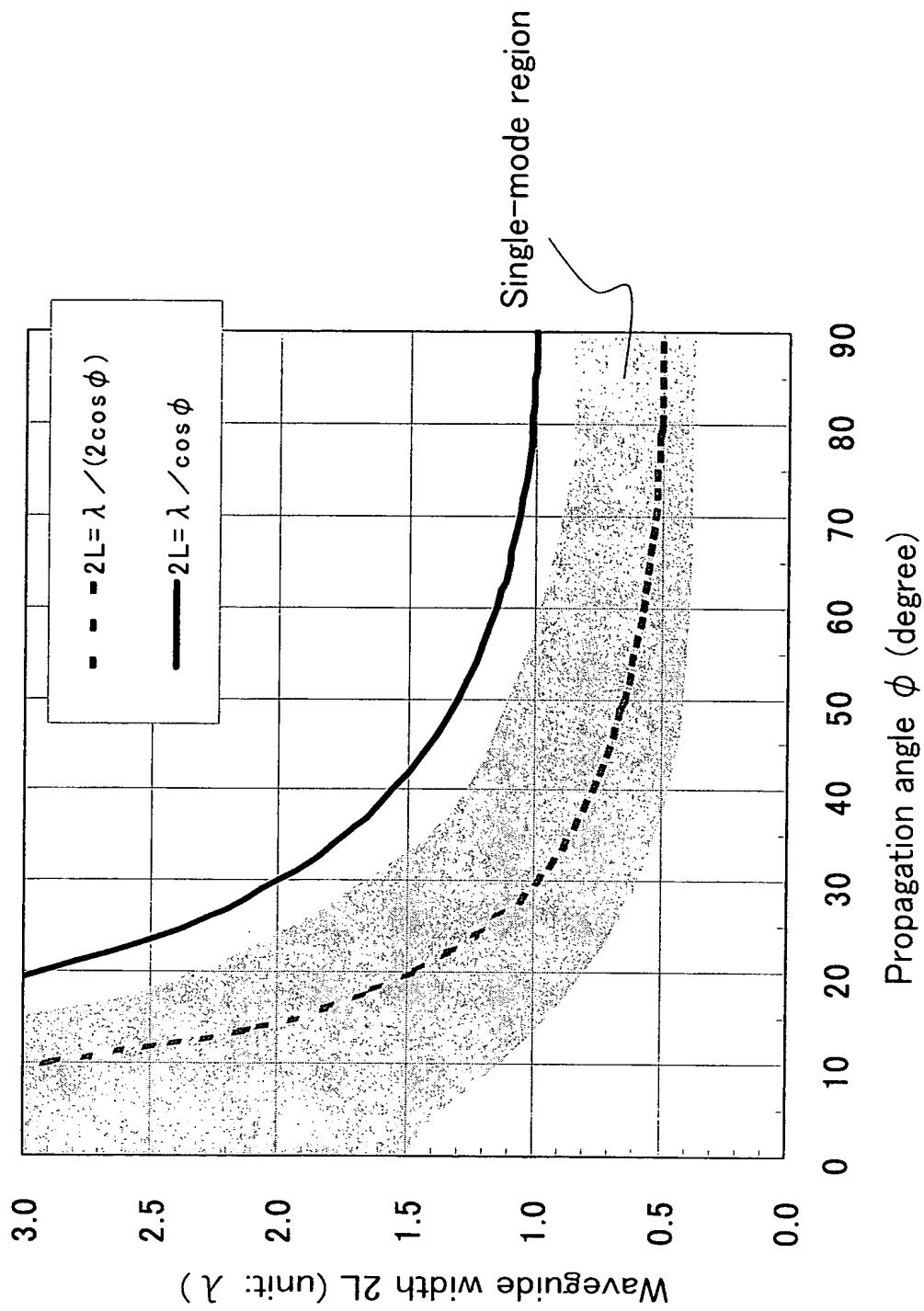


Fig. 33

$\lambda_0 = 1550\text{nm}$ $a/\lambda_0 = 0.28$ $n_{eff} = 0.3$ $ns = 1.45$

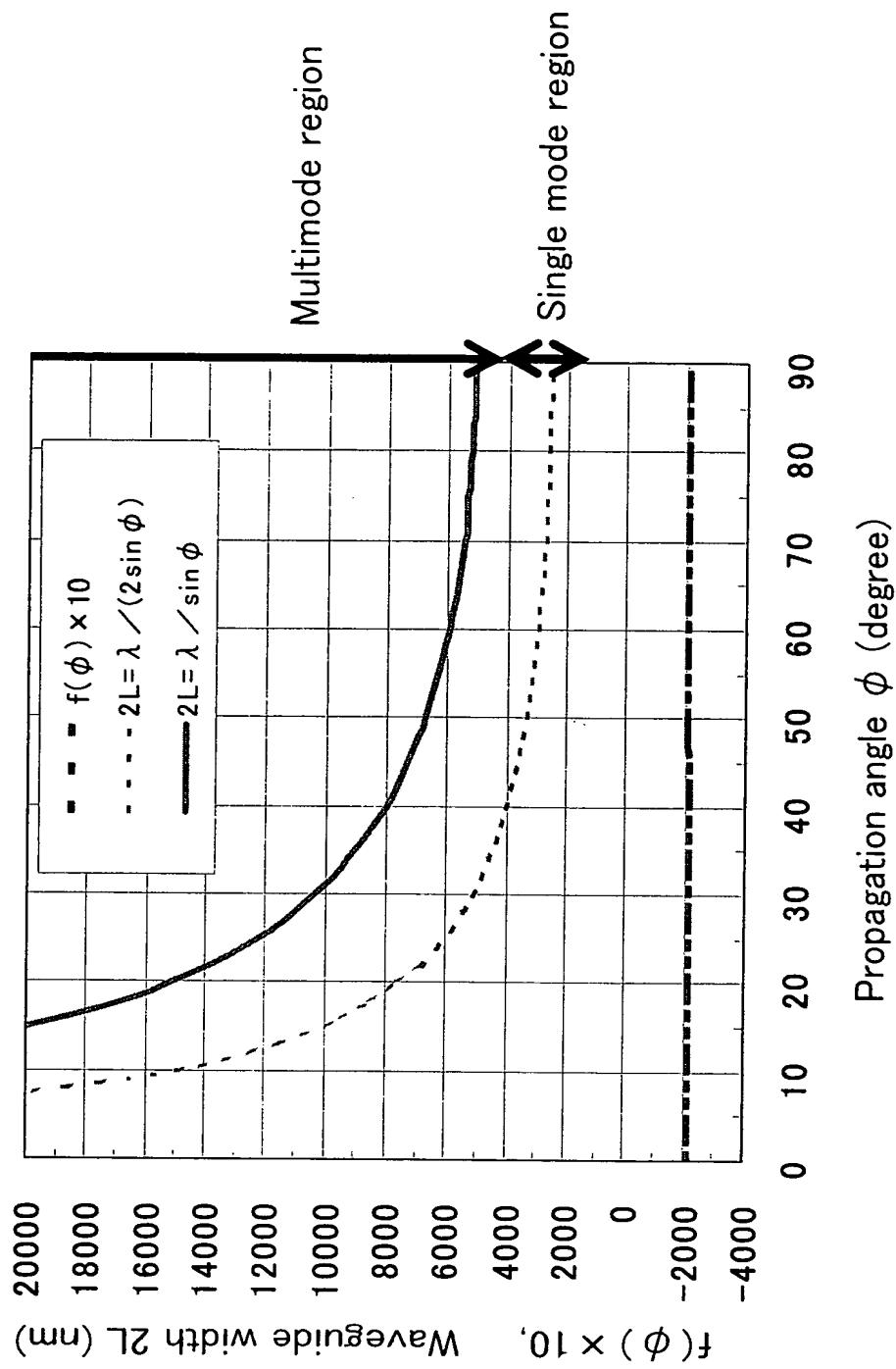


Fig. 34

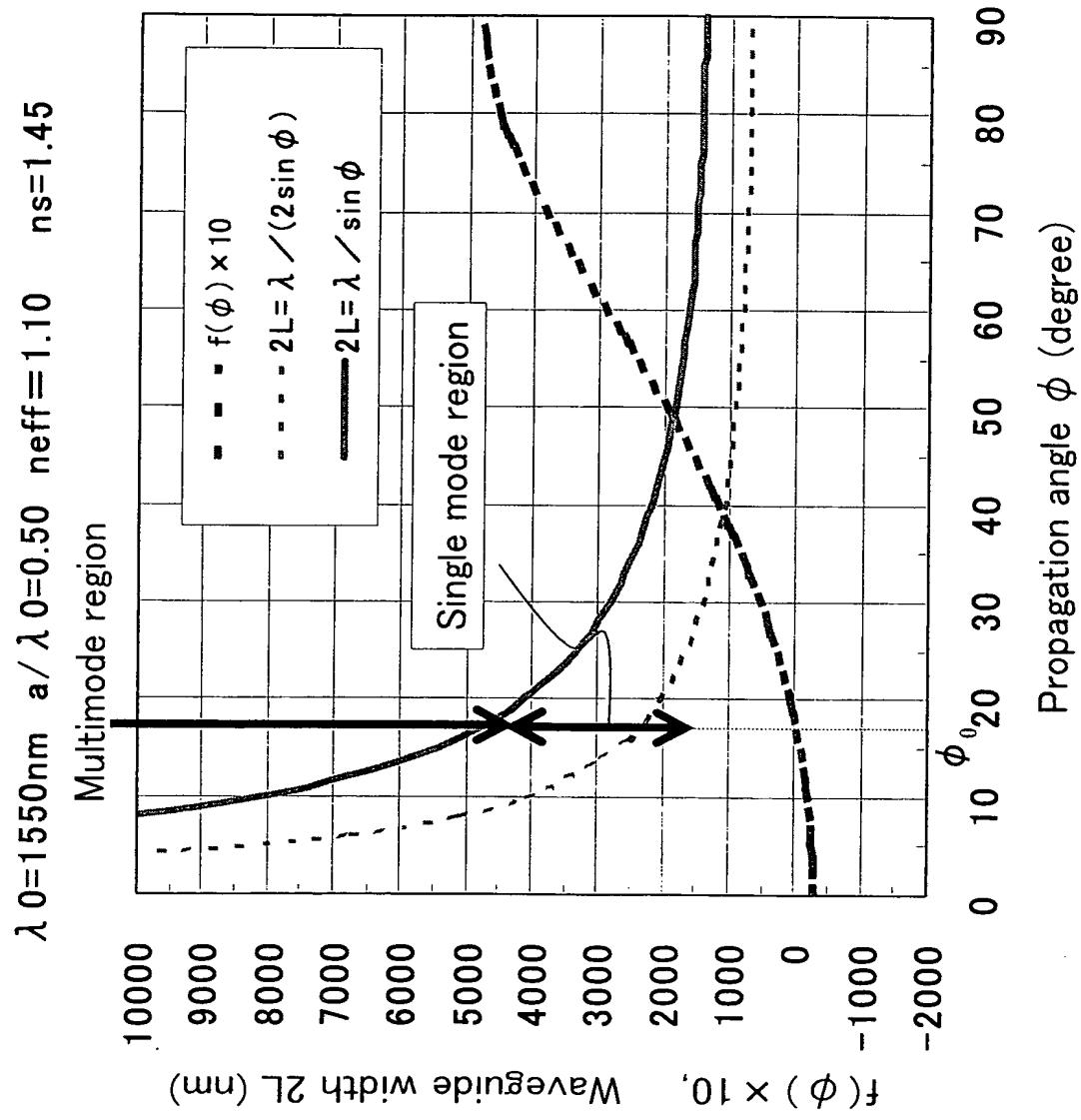


Fig. 35

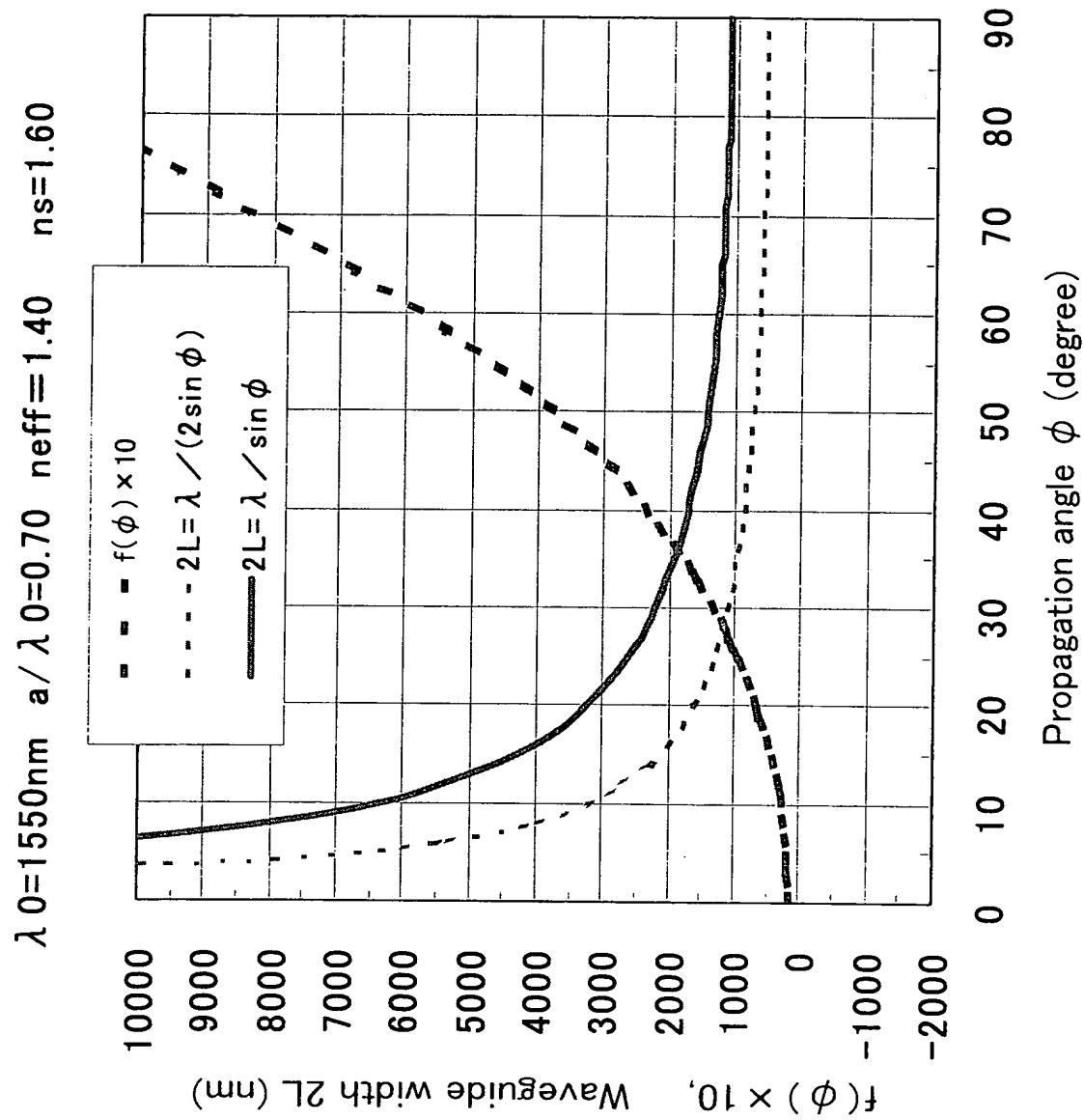


Fig. 36

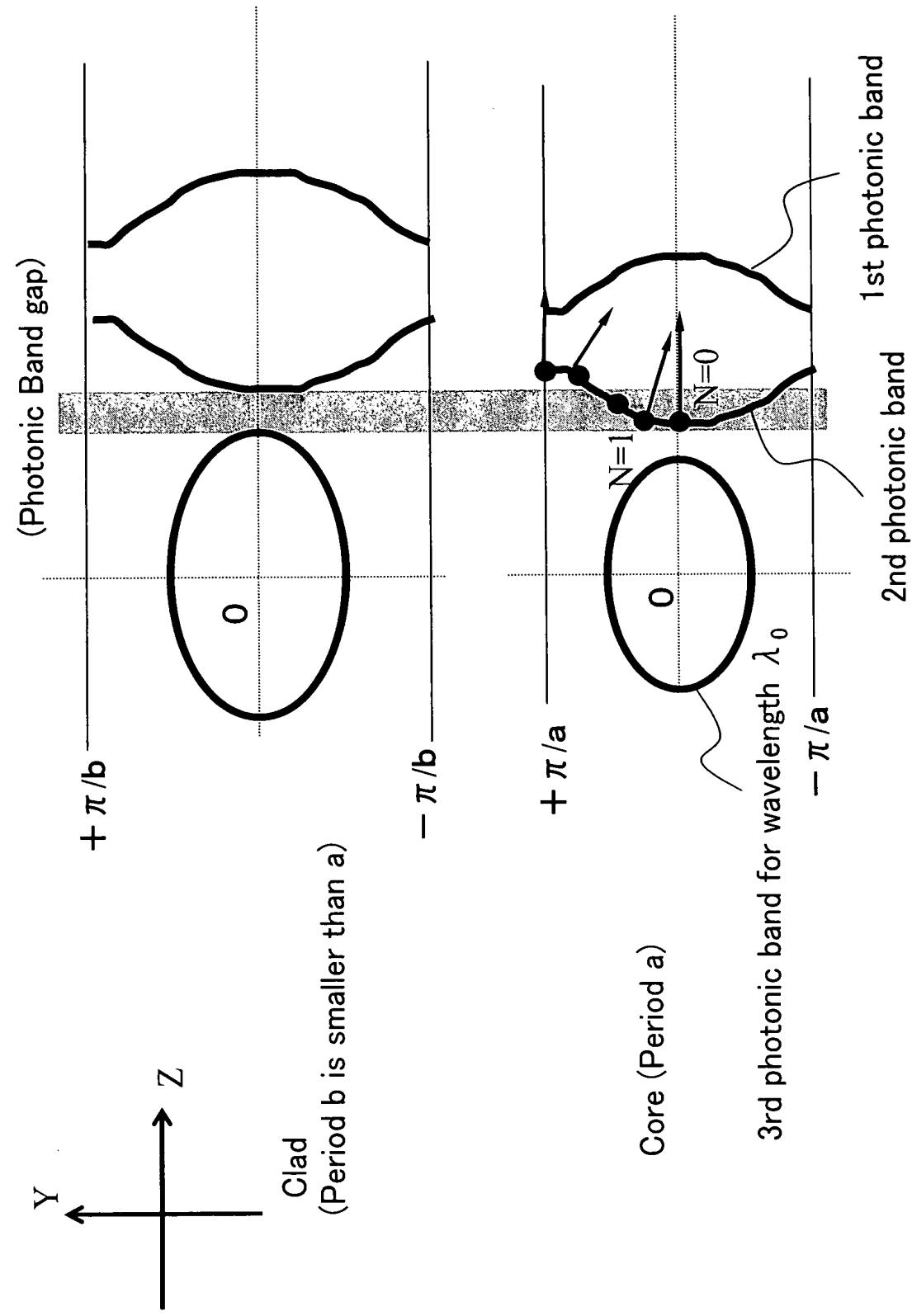


Fig. 37

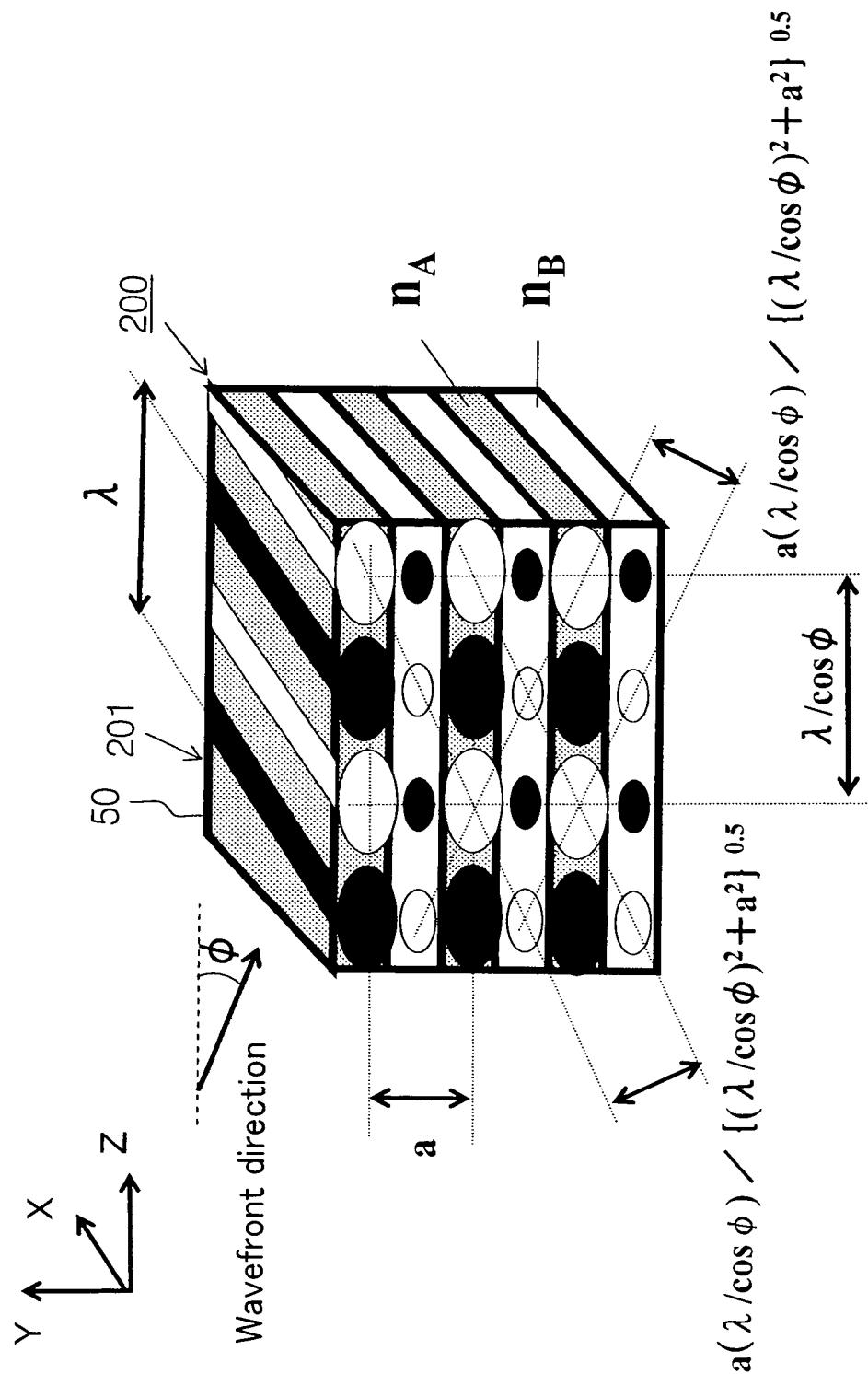


Fig. 38

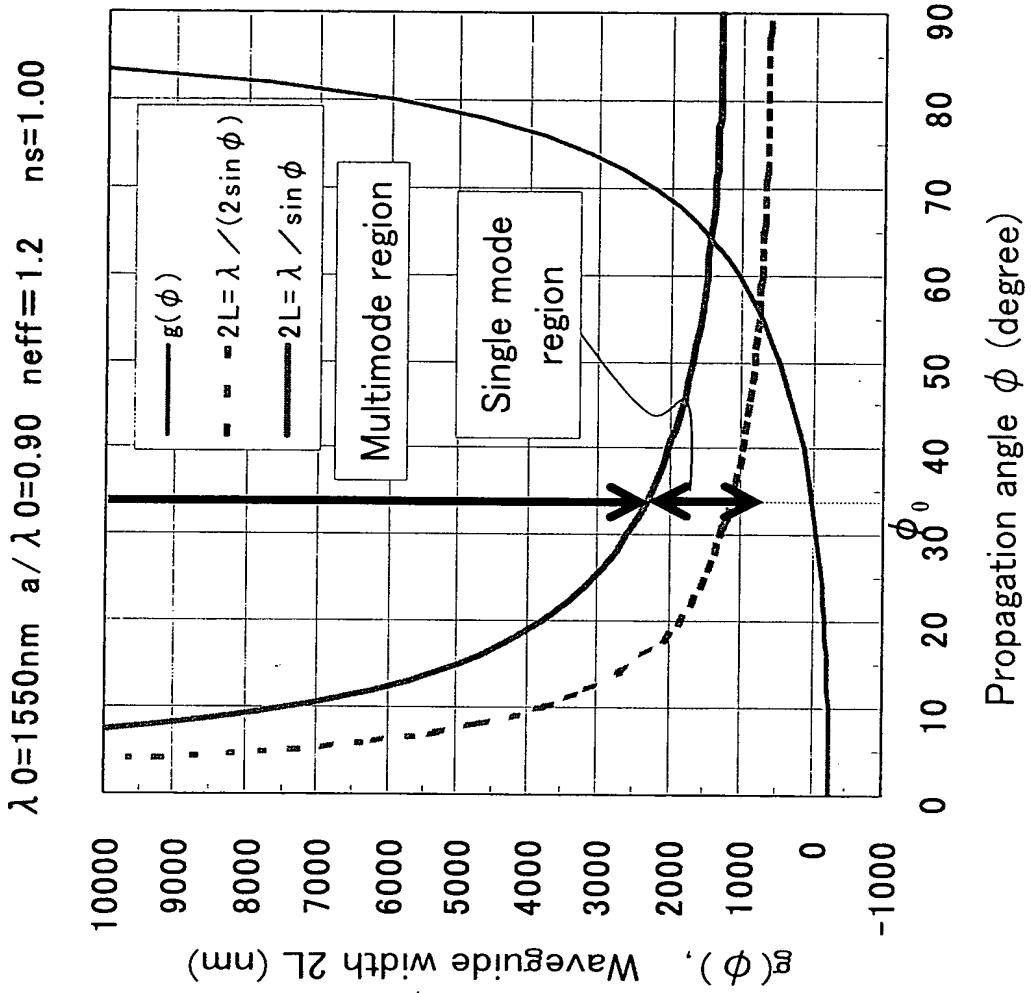


Fig. 39

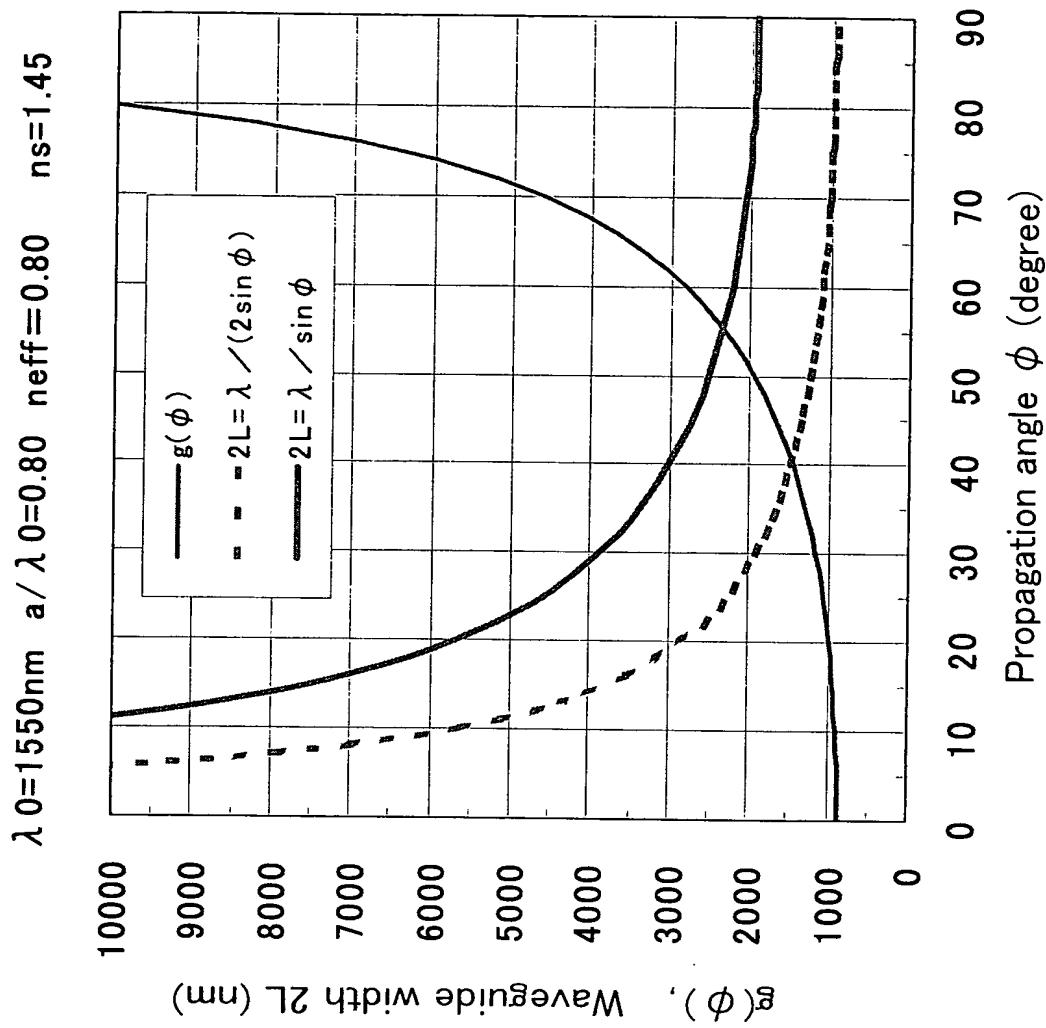


Fig. 40

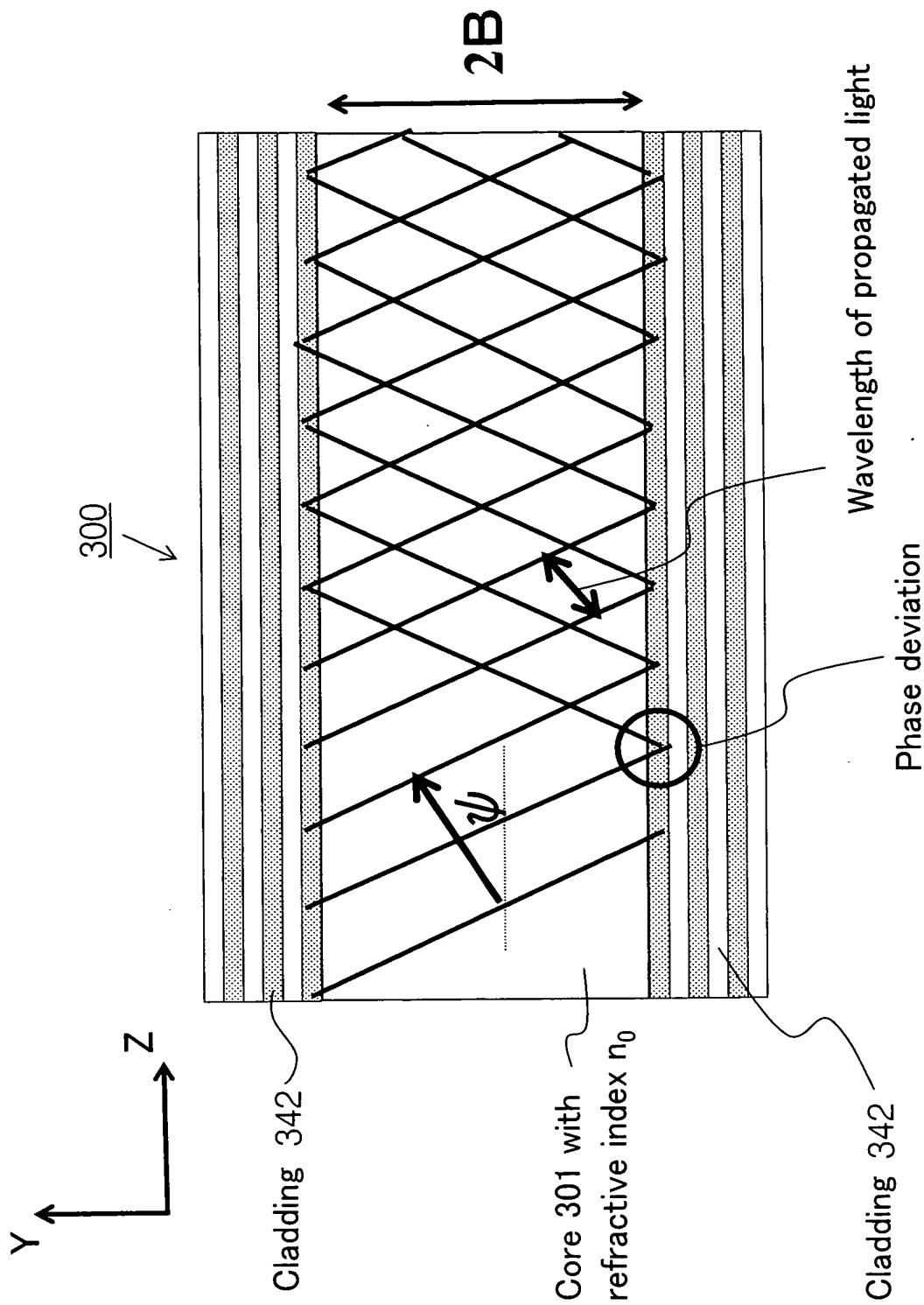


Fig. 41

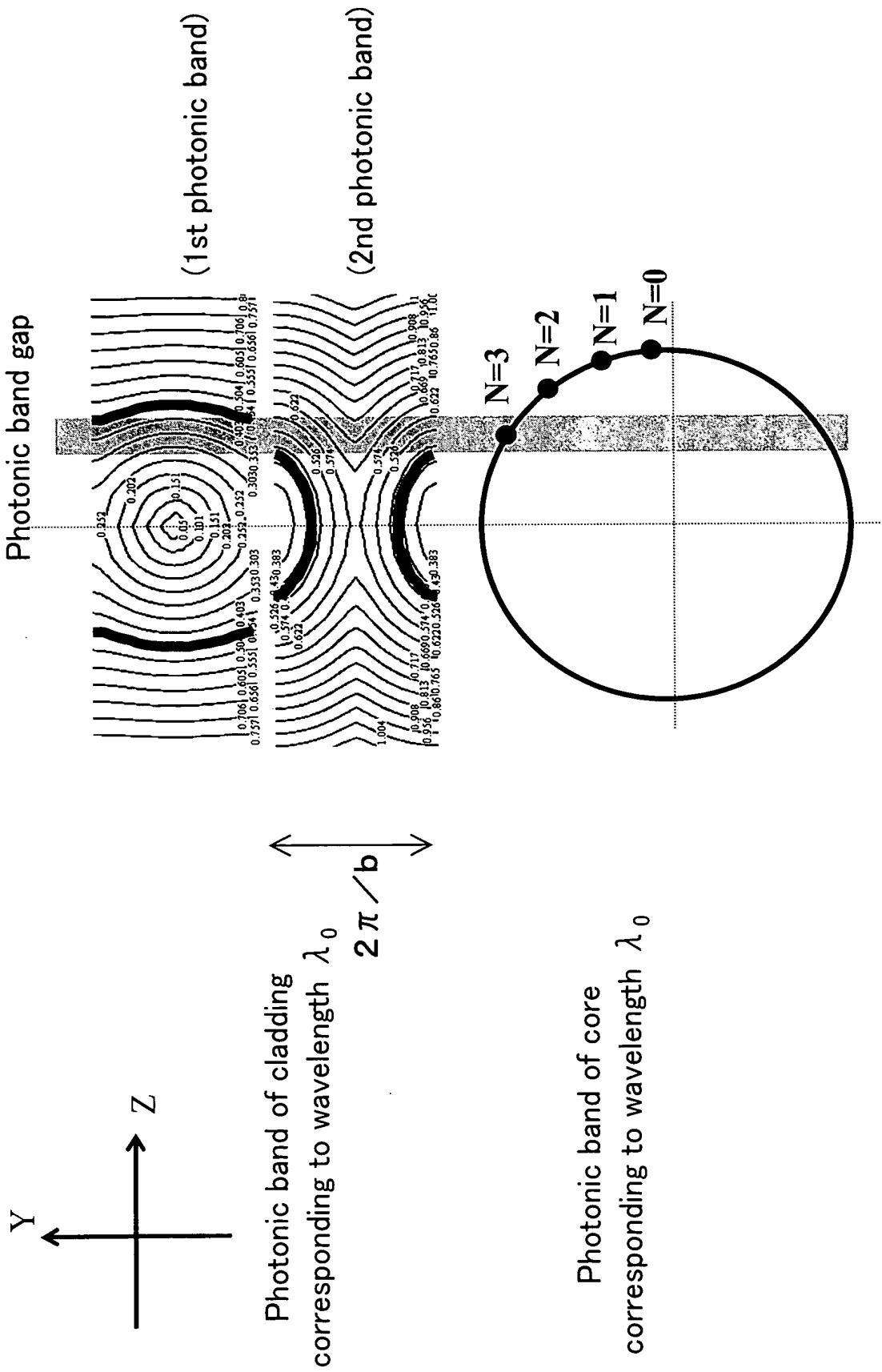


Fig. 42

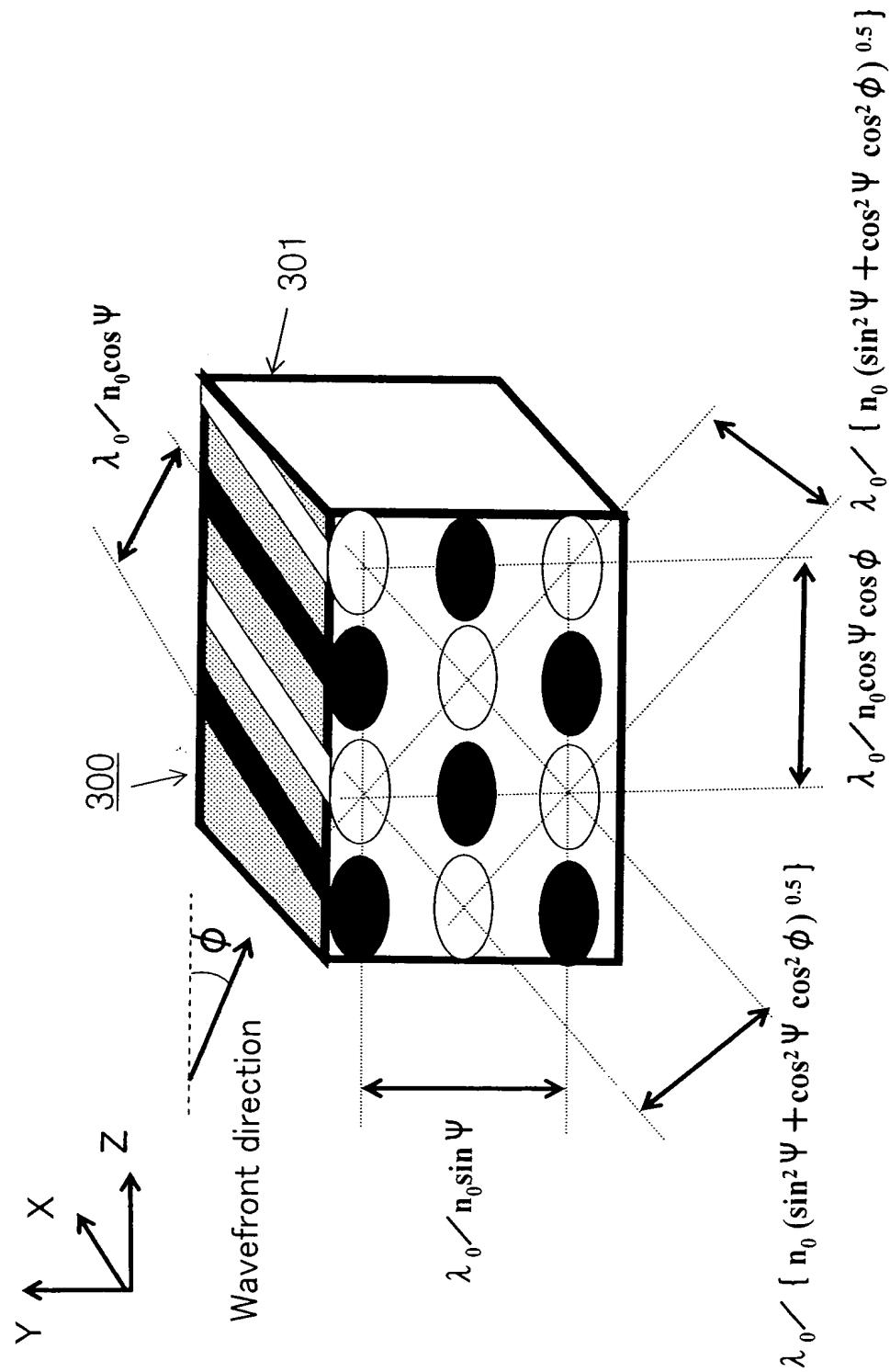


Fig. 43

$\lambda_0 = 1550 \text{ nm}$ $\psi = 56^\circ$ $n_0 = 1.45$ $n_s = 1.00$

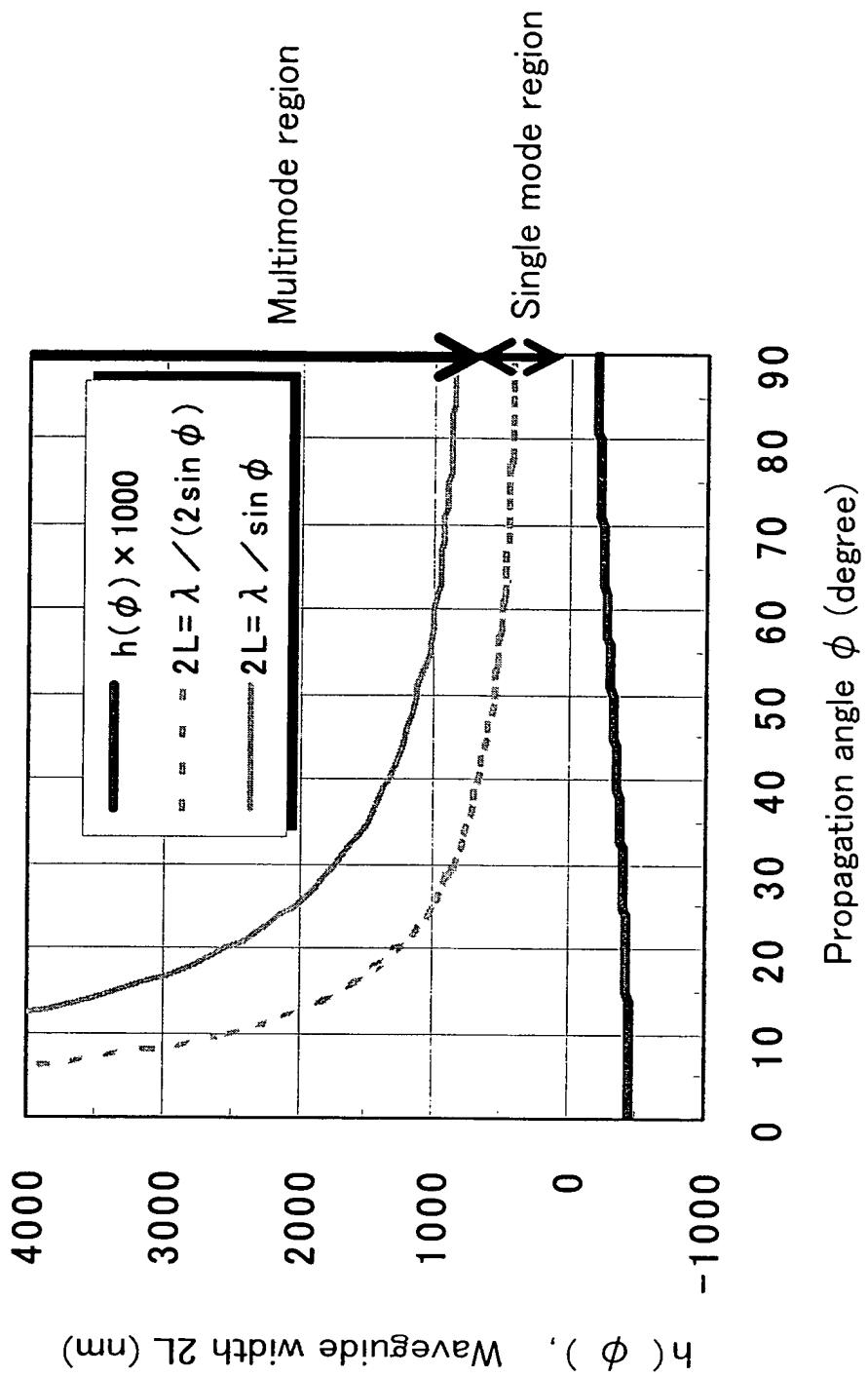


Fig. 44

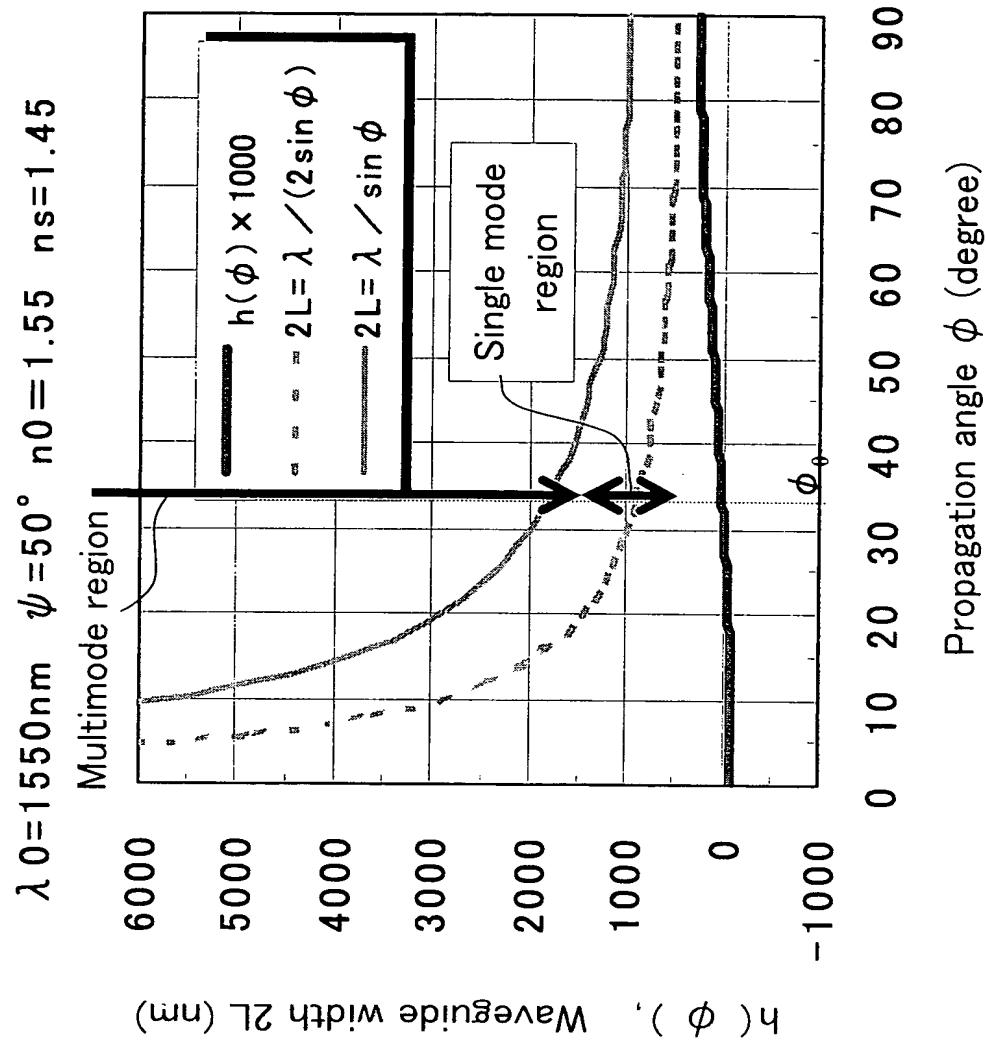
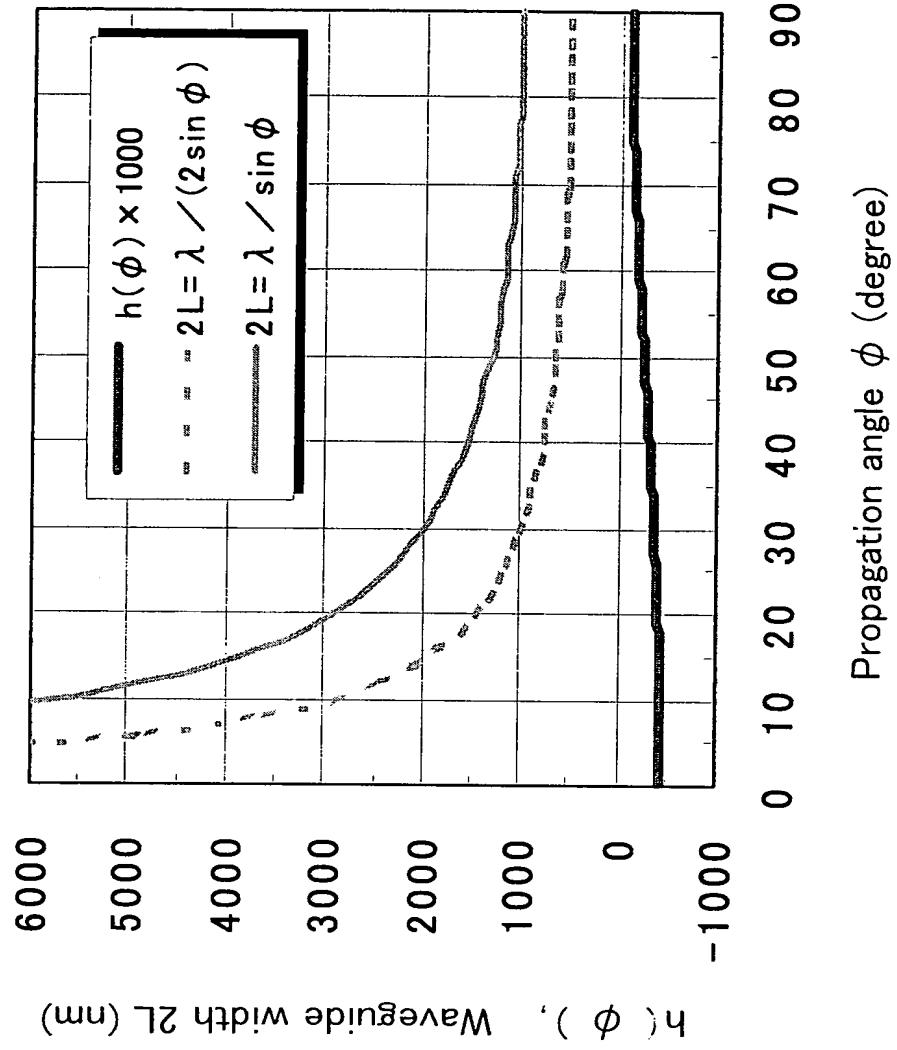


Fig. 45

$\lambda_0 = 1550 \text{ nm}$ $\psi = 50^\circ$ $n_0 = 1.45$ $n_s = 1.00$



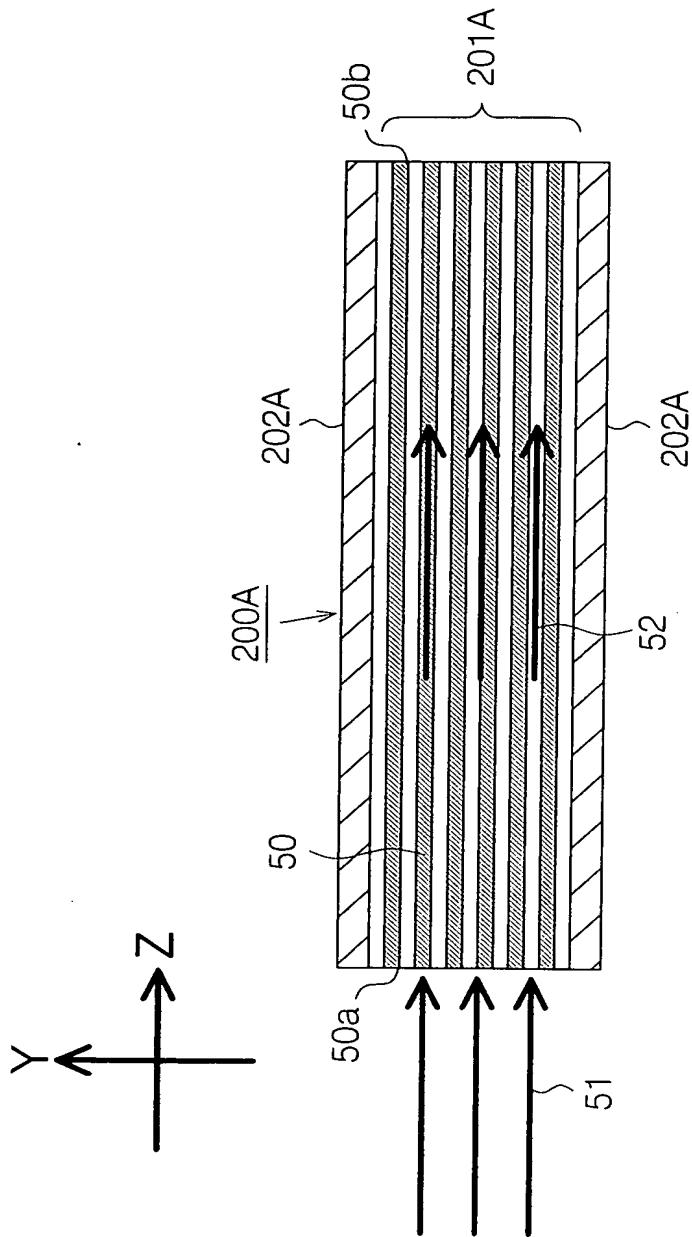


Fig.46

Fig.47

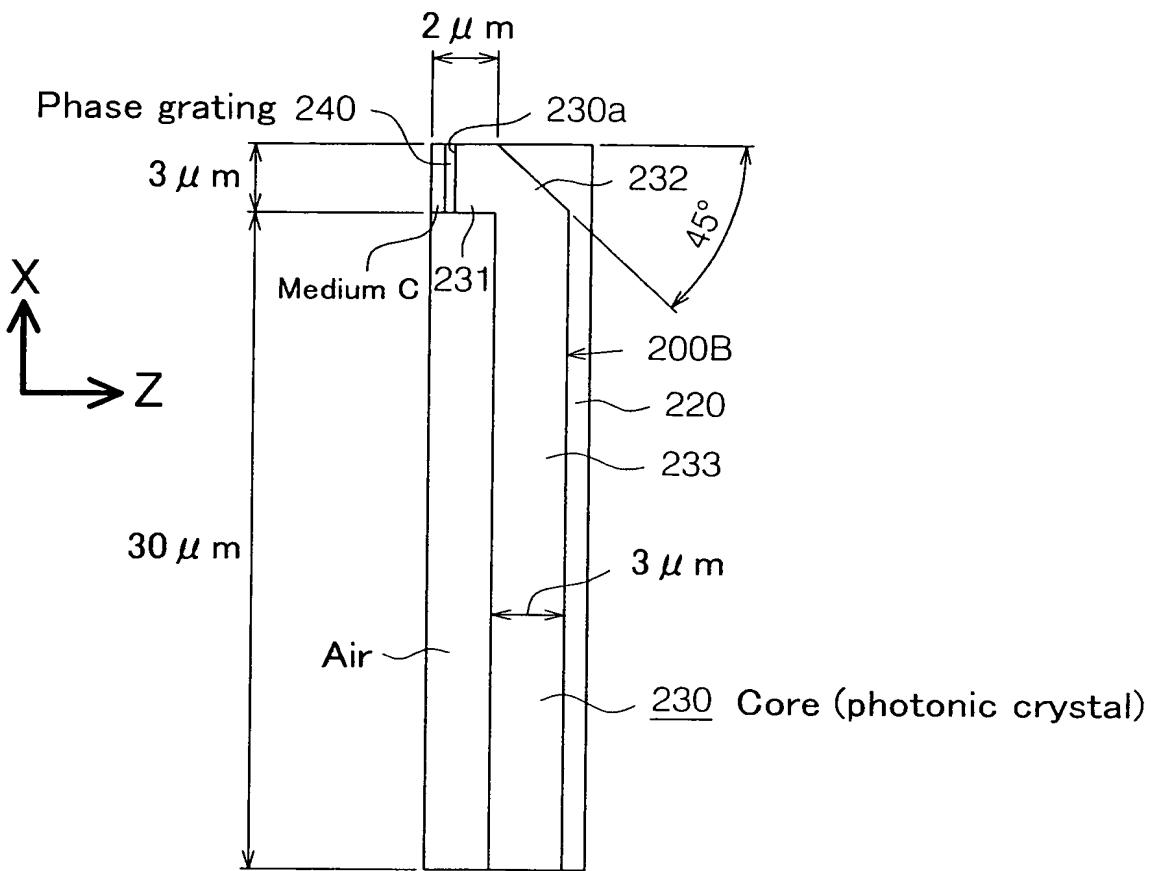


Fig.48

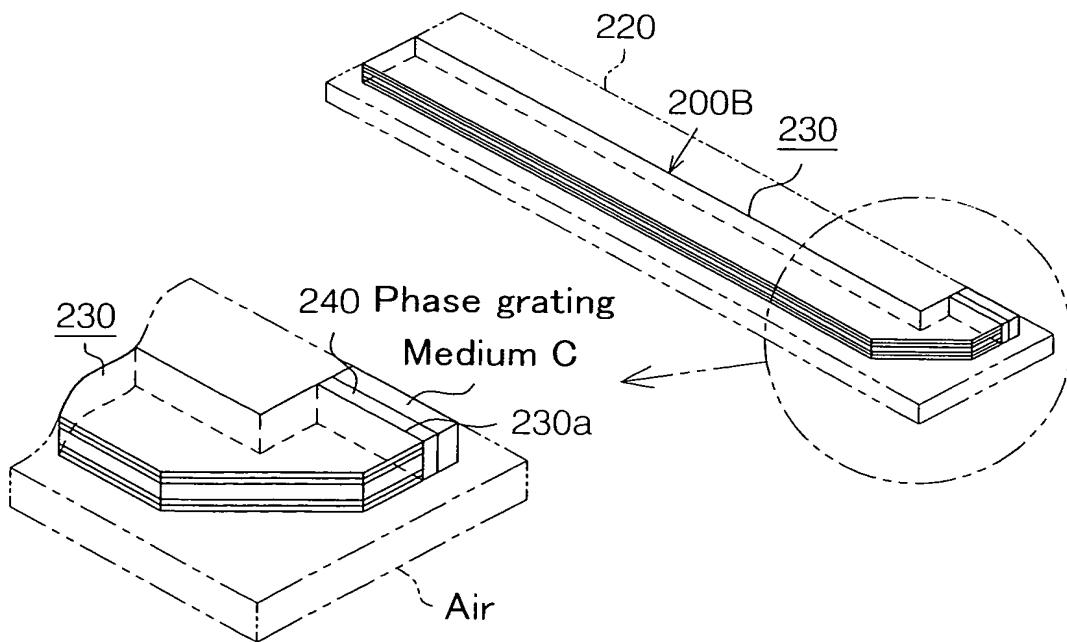


Fig.49

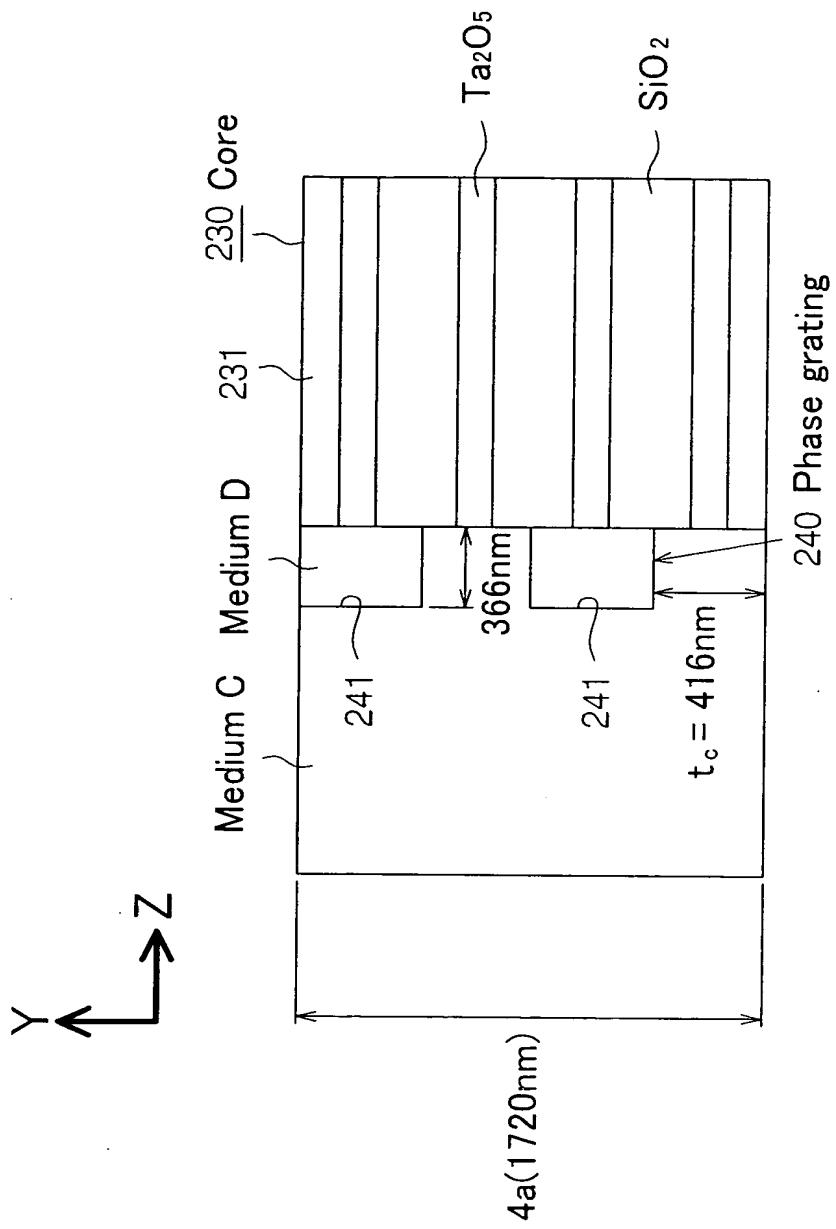
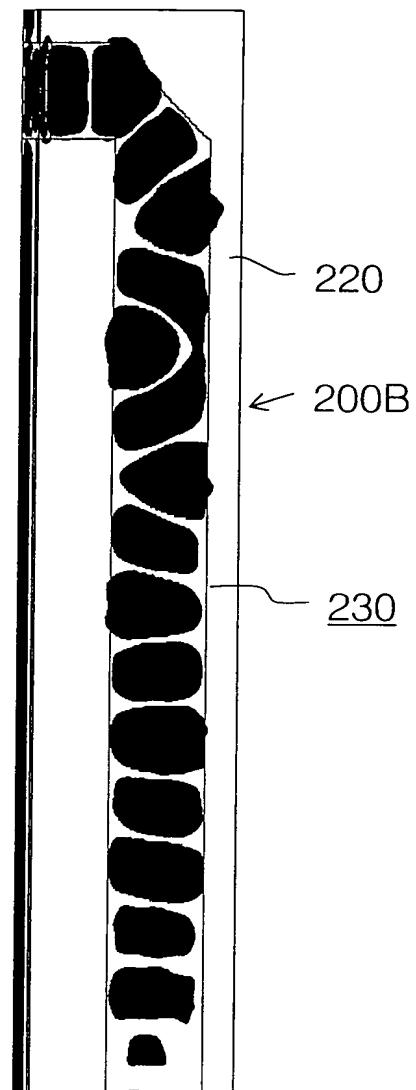
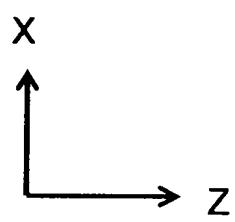


Fig. 50

240



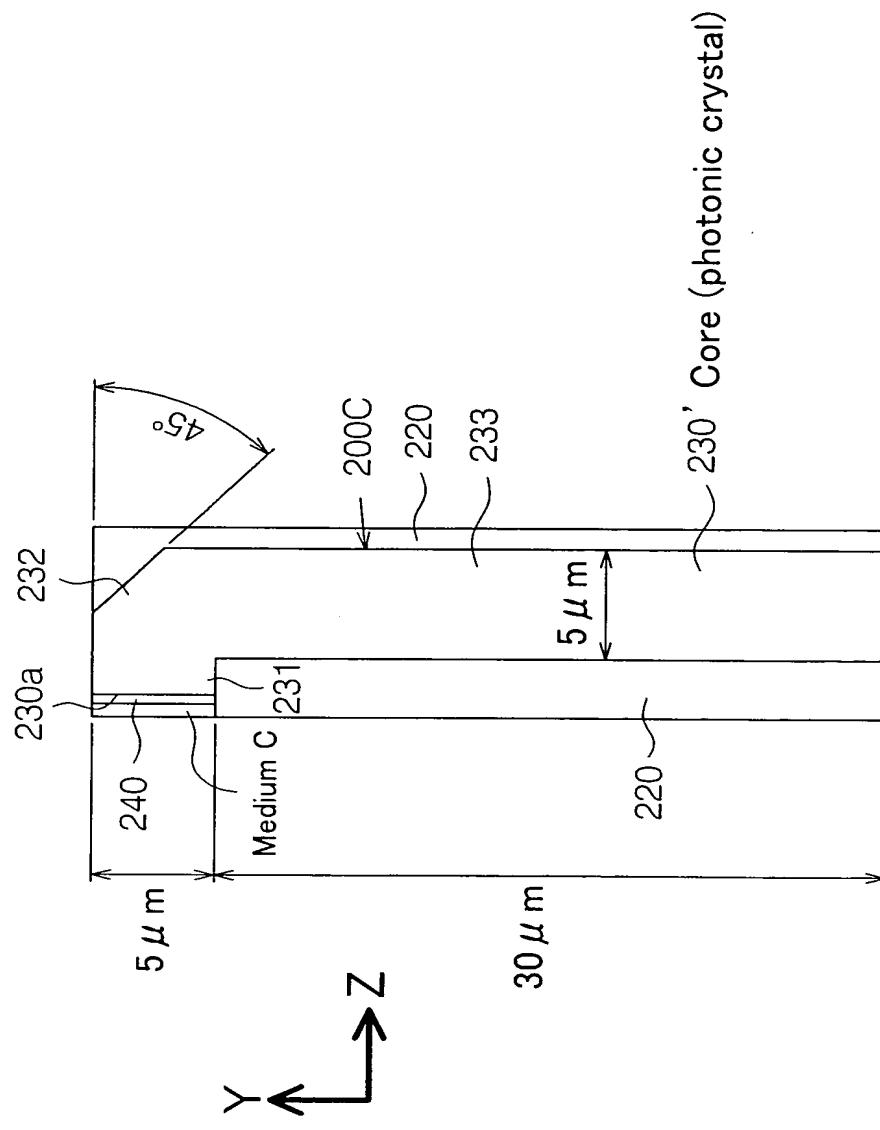


Fig.51

Fig. 52

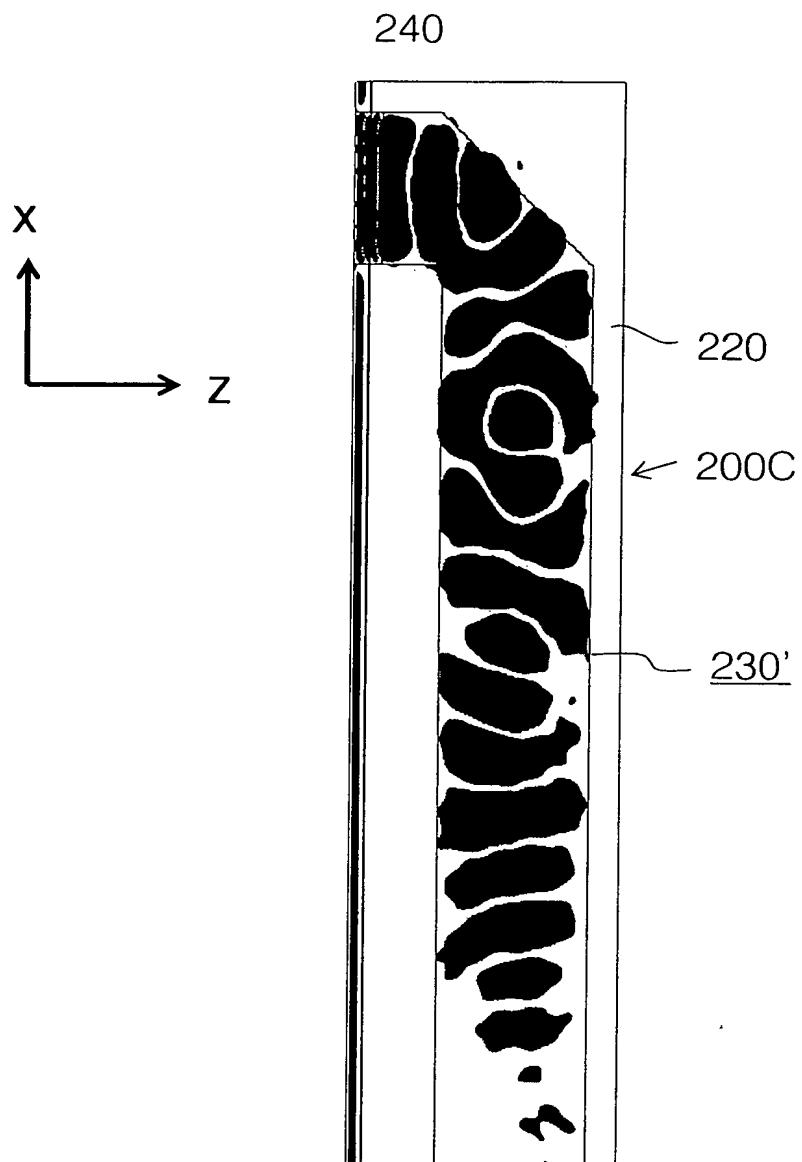


Fig.53

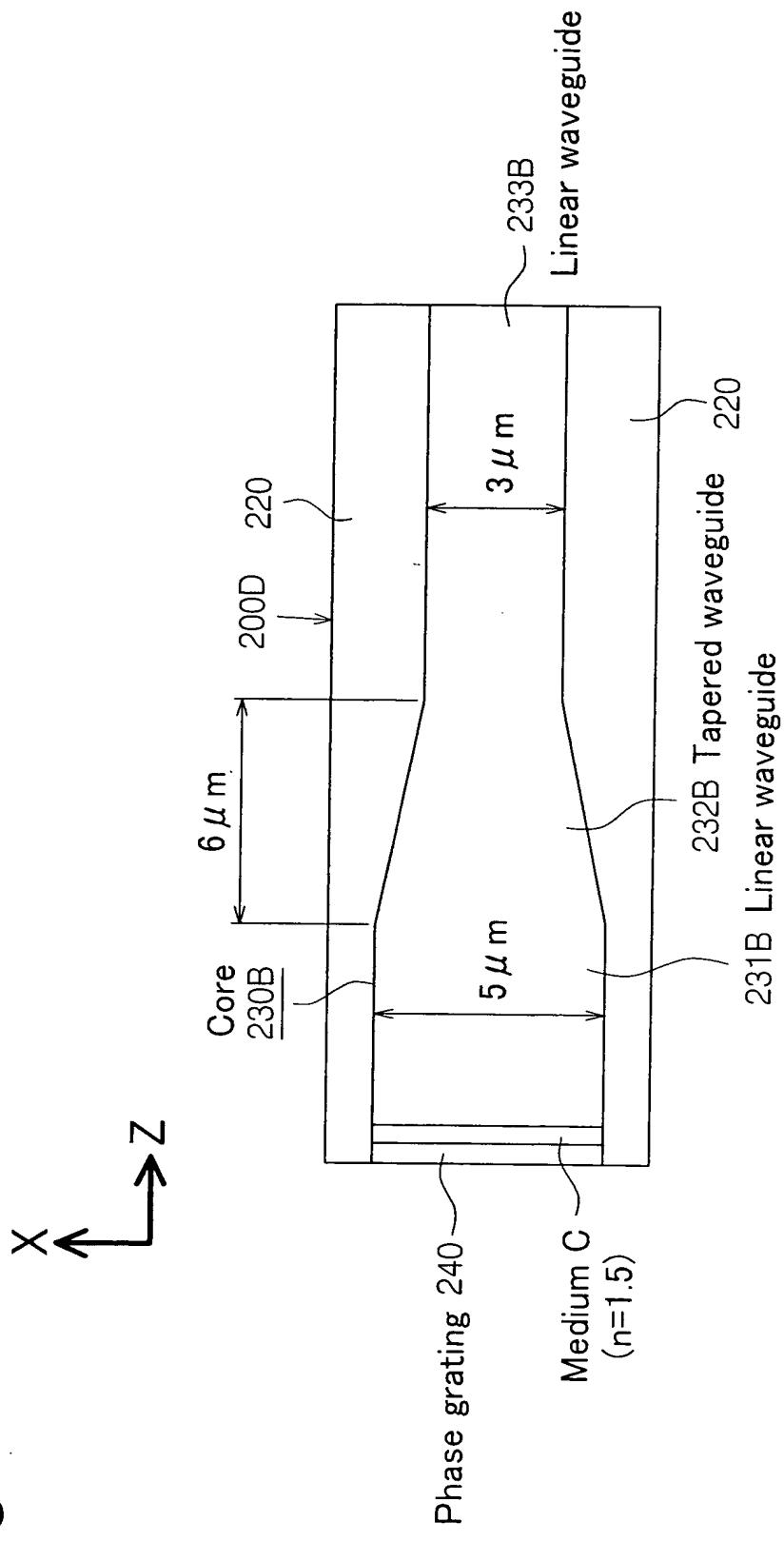


Fig. 54

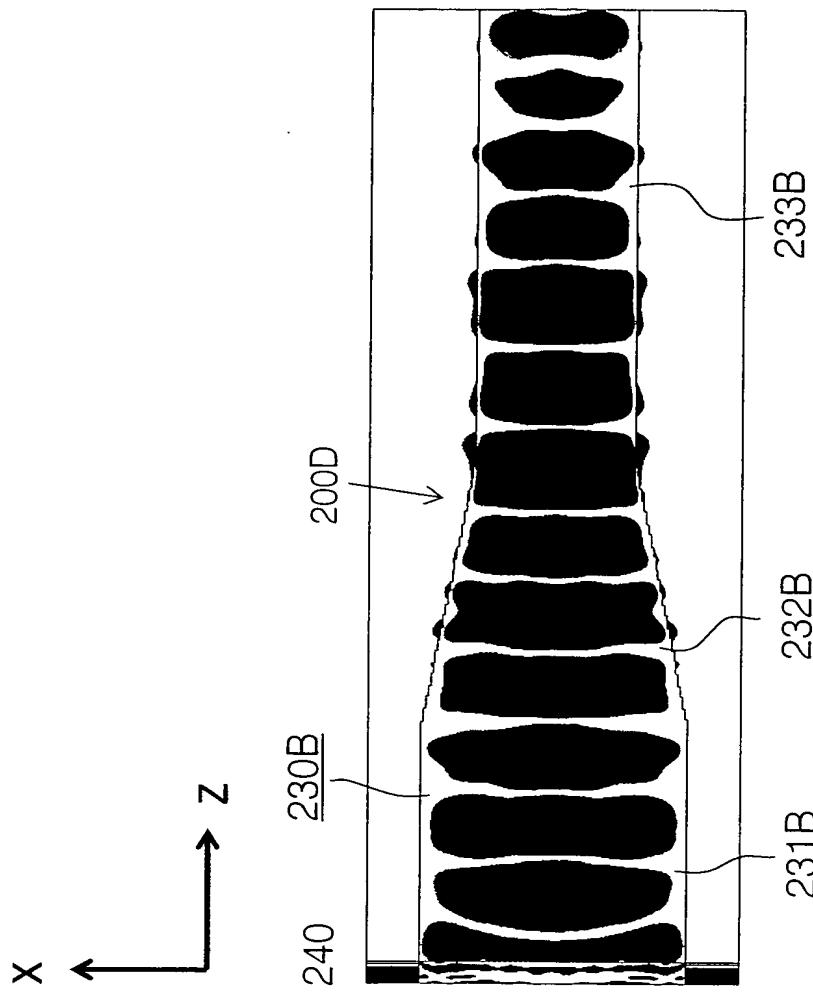


Fig.55

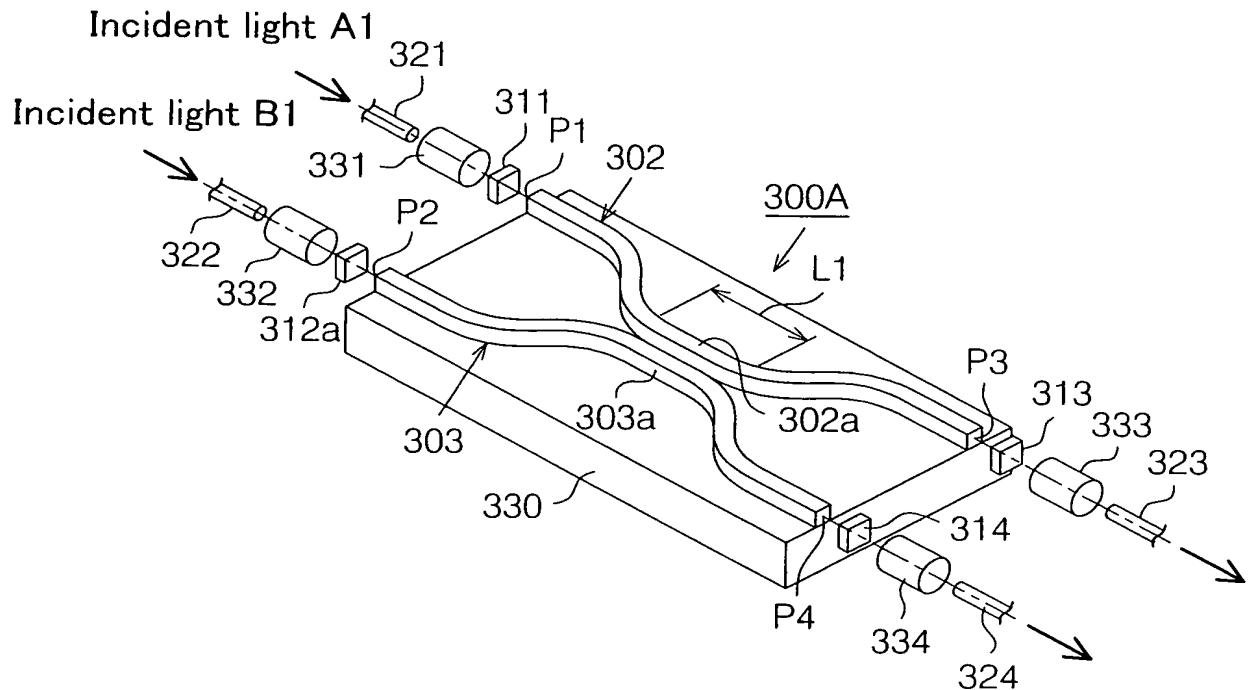


Fig.56

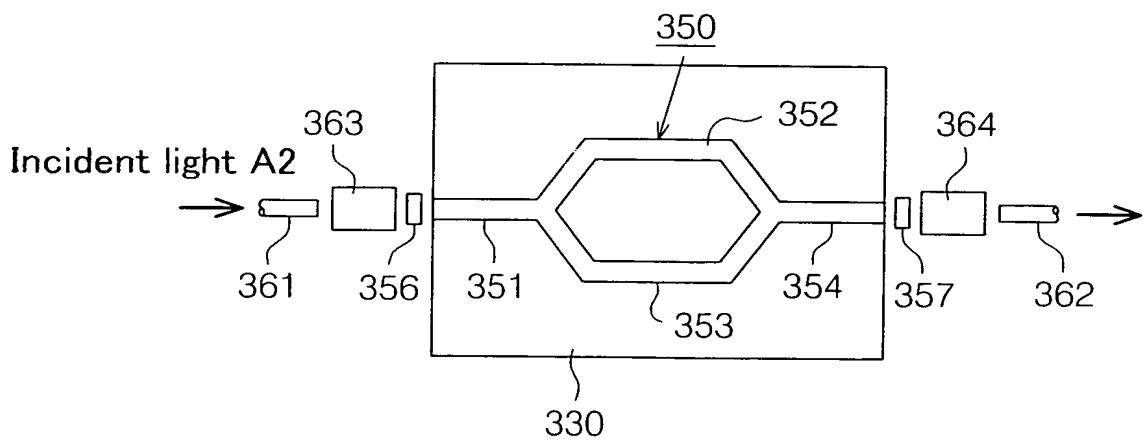


Fig.57

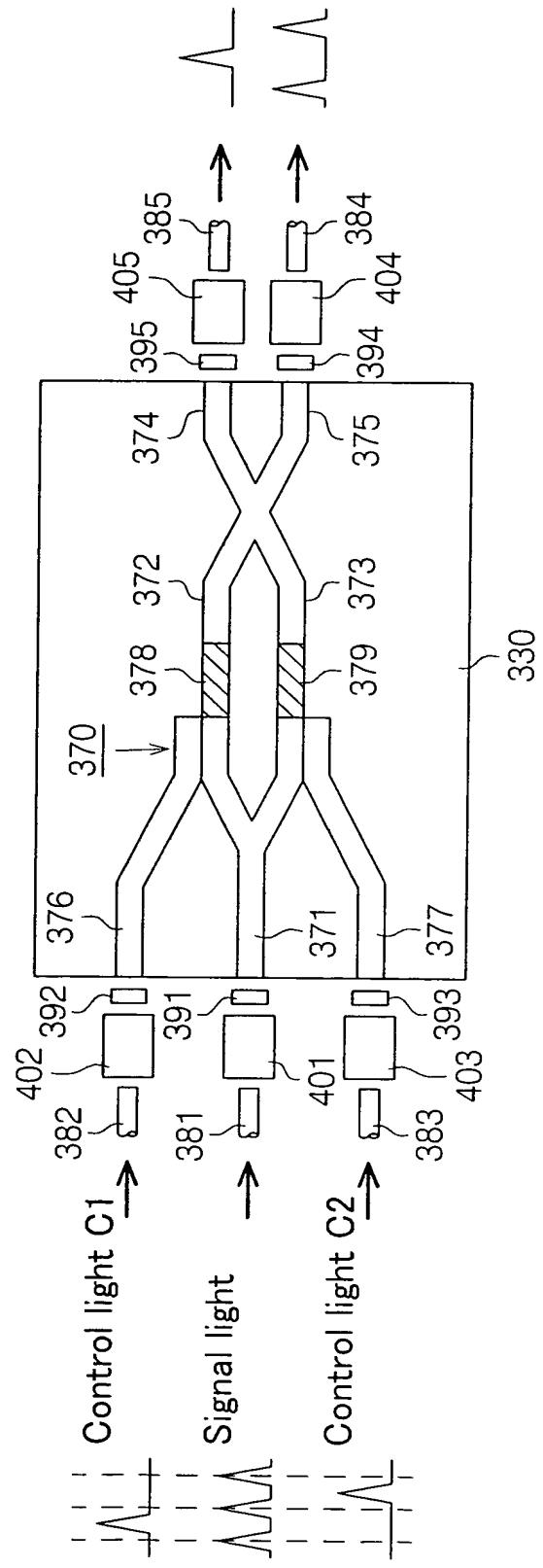
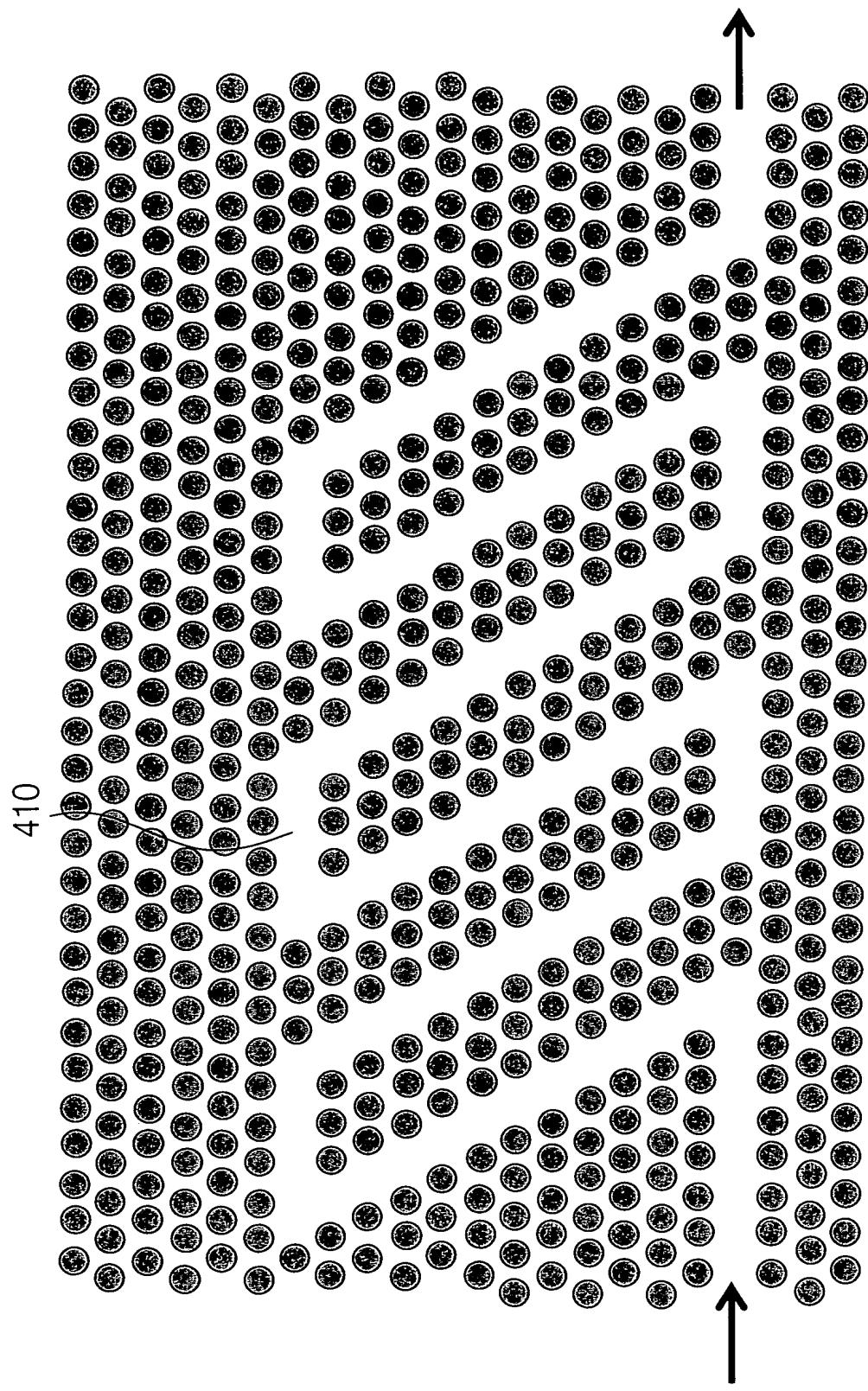


Fig. 58



Example of delay line by defect waveguide in two-dimensional photonic crystal

Fig. 59

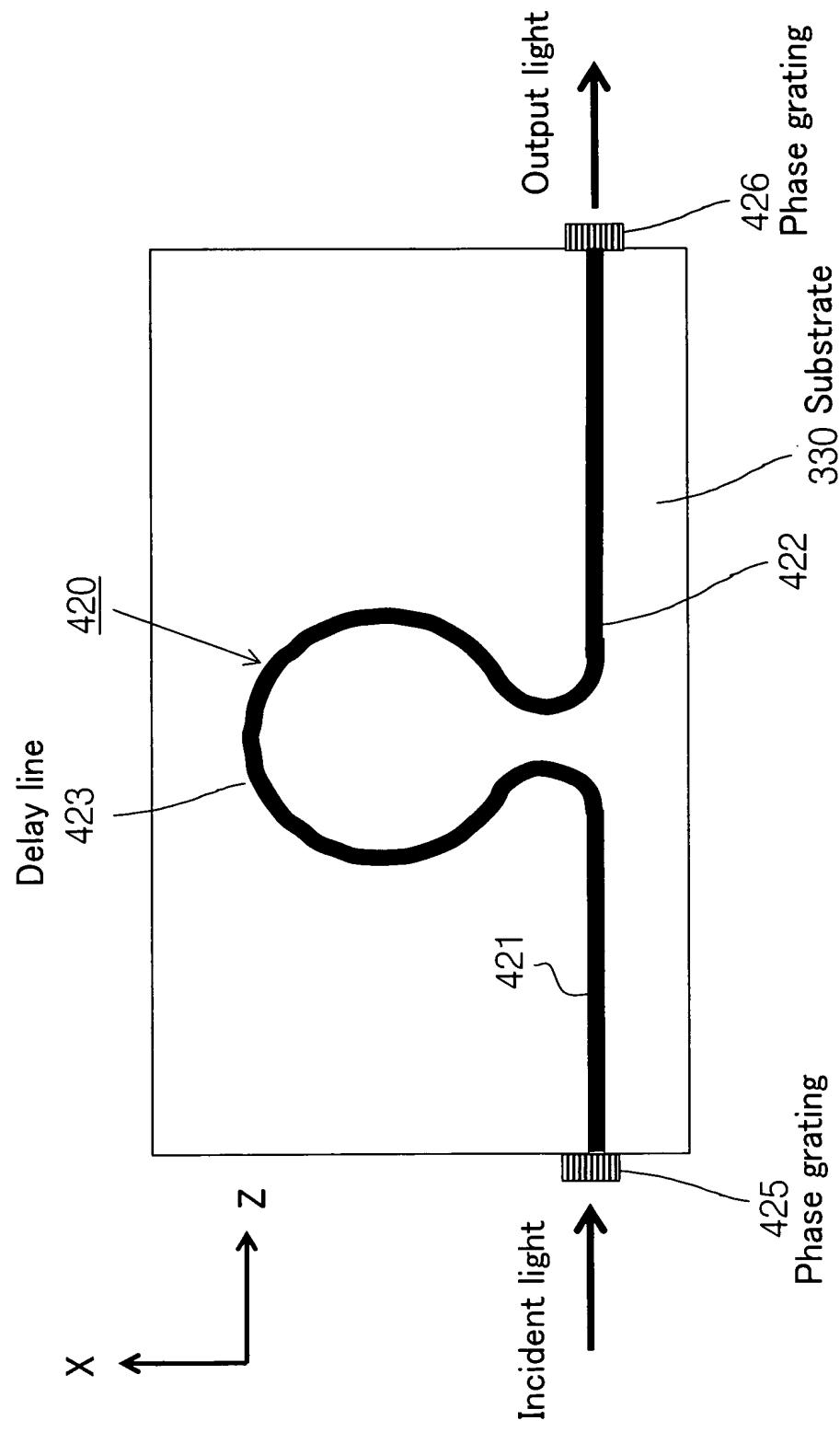


Fig. 60

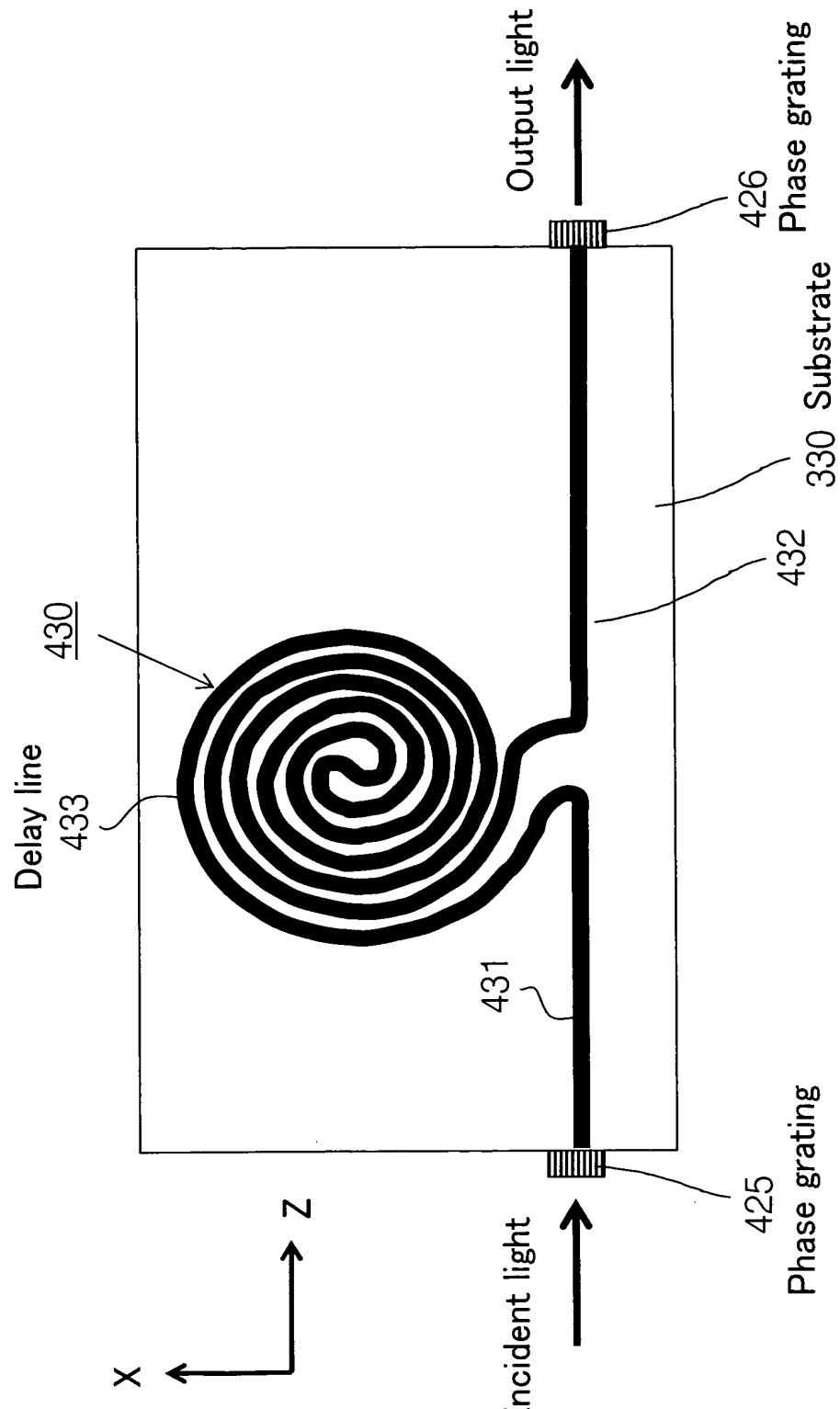


Fig. 61

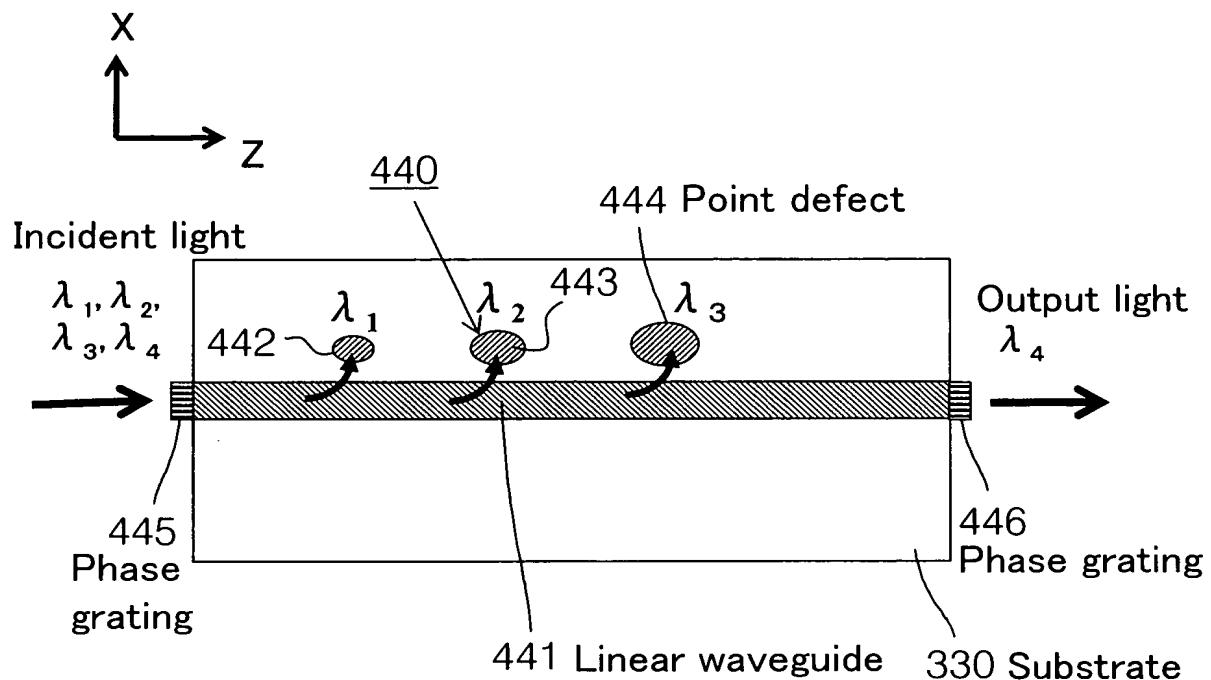


Fig. 62

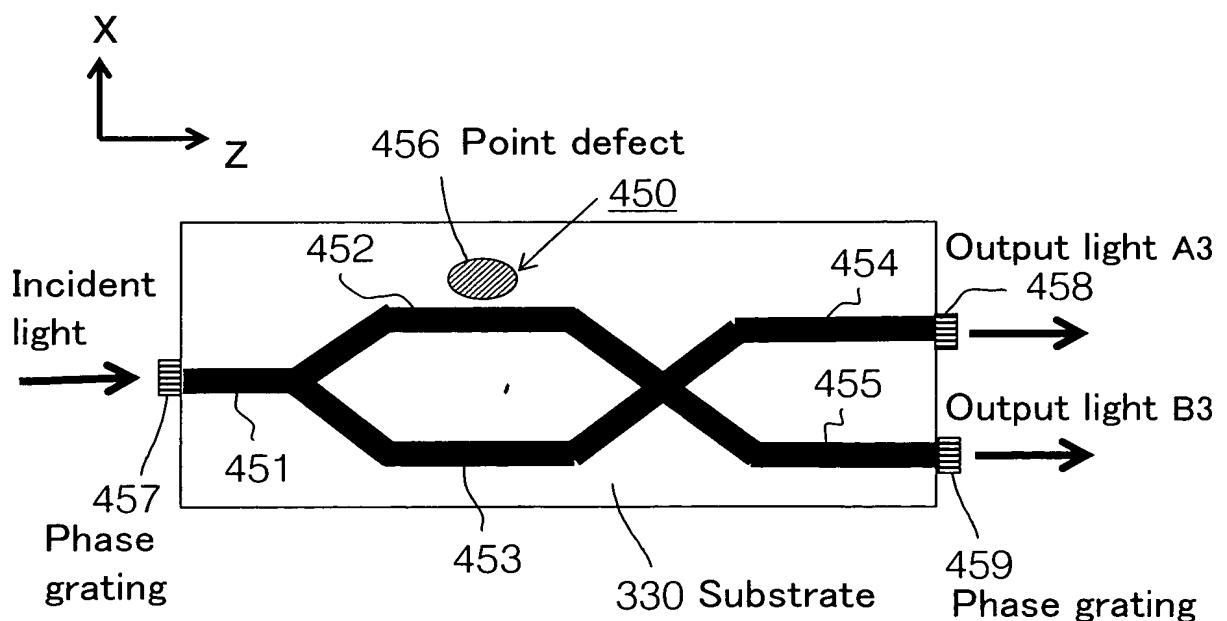


Fig. 63

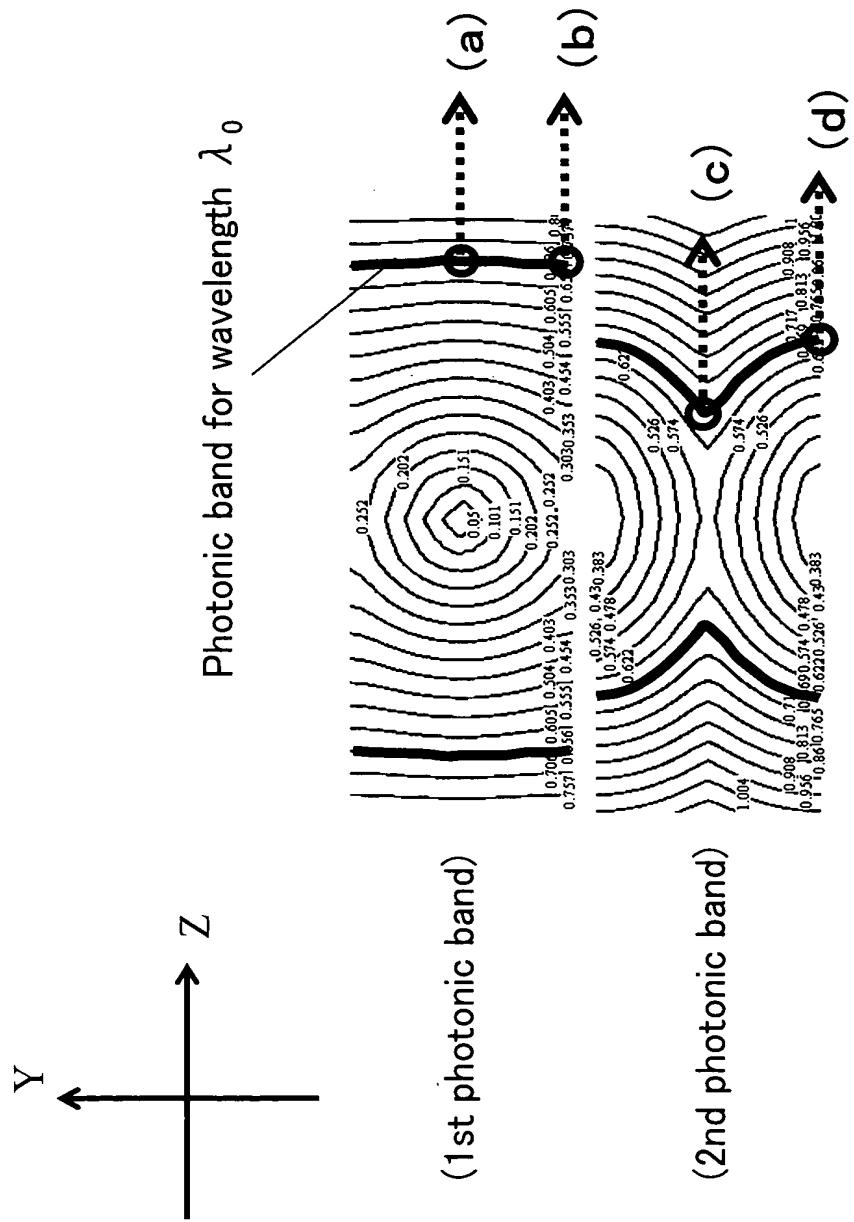
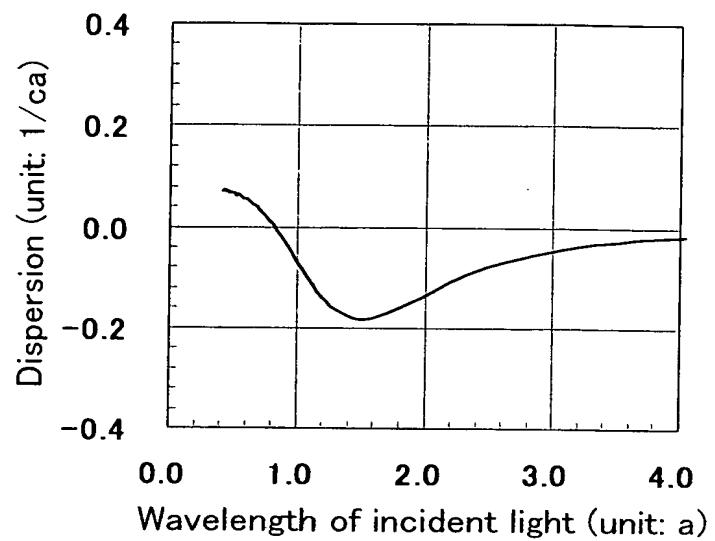
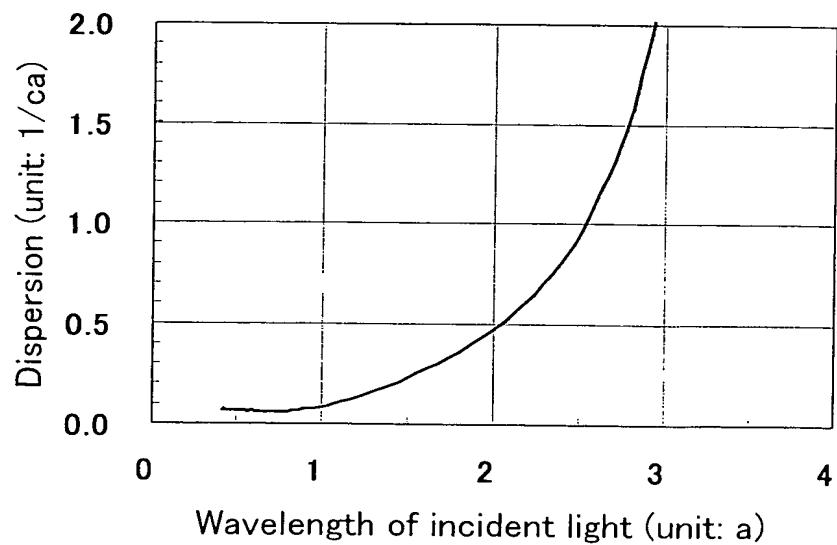


Fig. 64



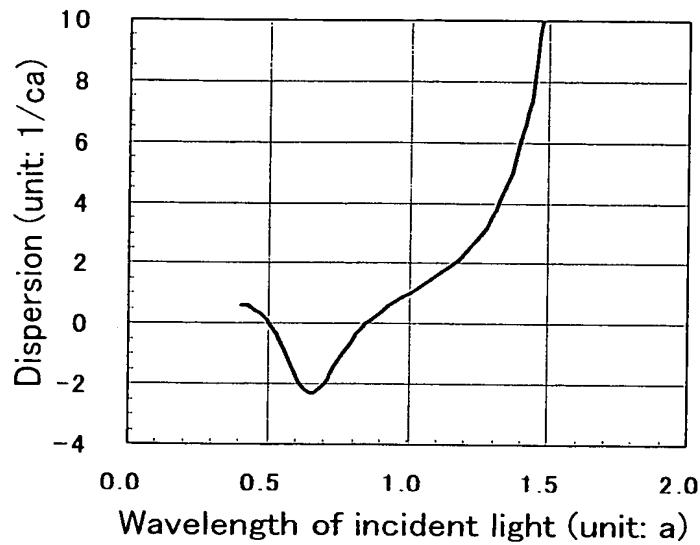
(a)

Fig. 65



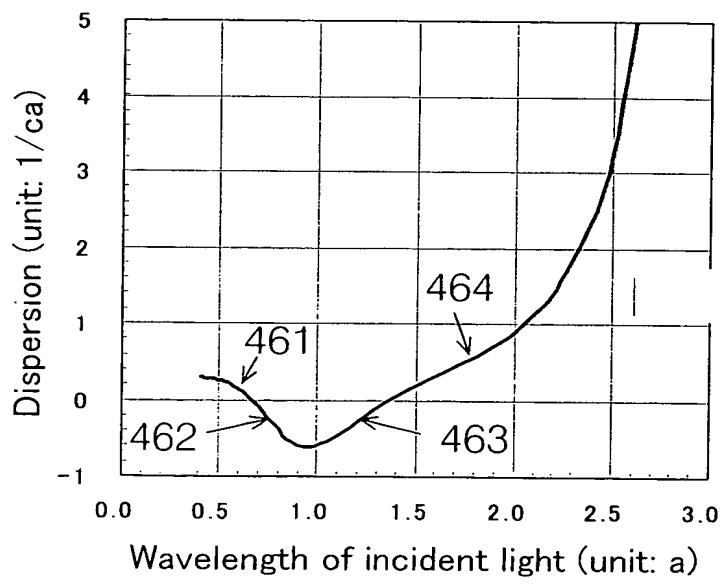
(b)

Fig. 66



(c)

Fig. 67



(d)

Fig.68

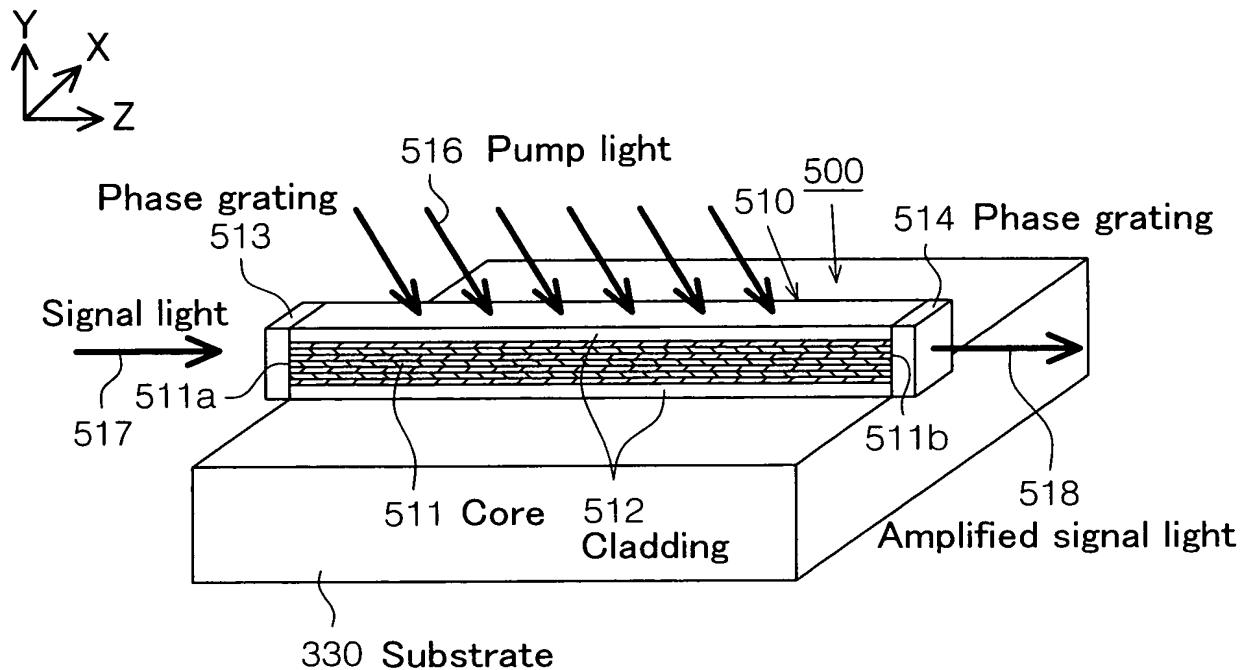


Fig.69

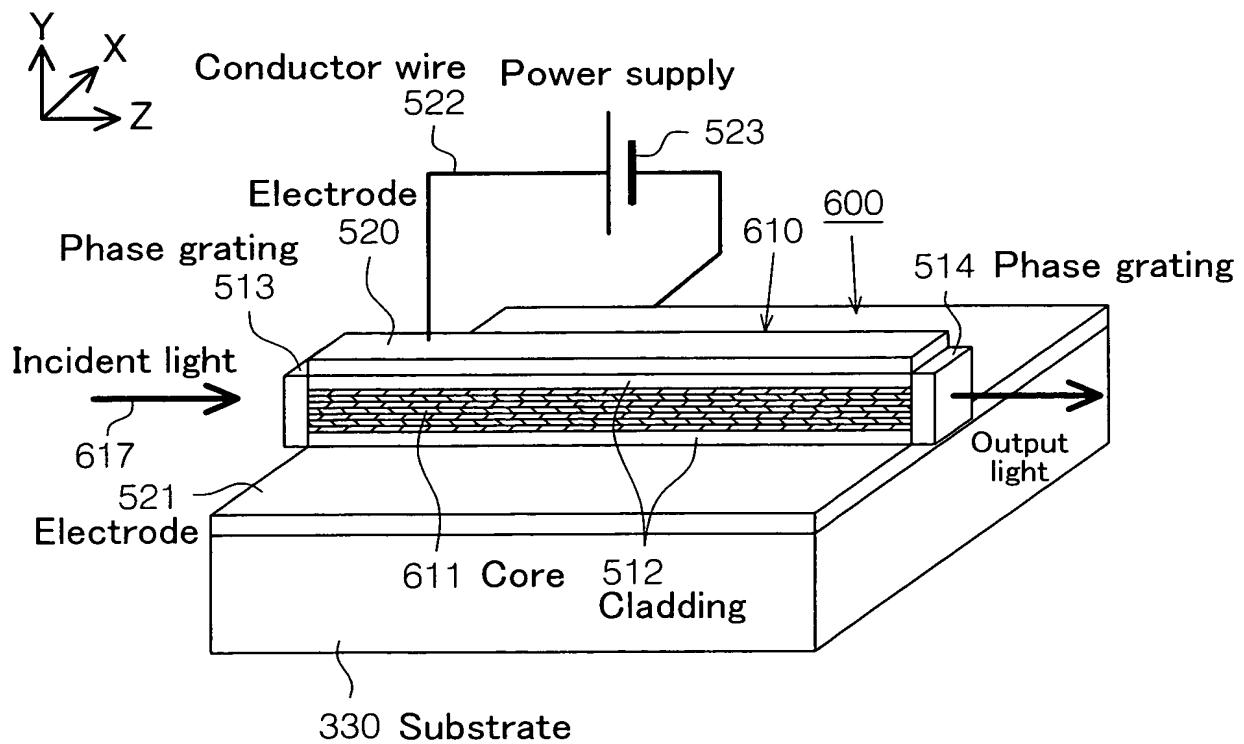


Fig.70

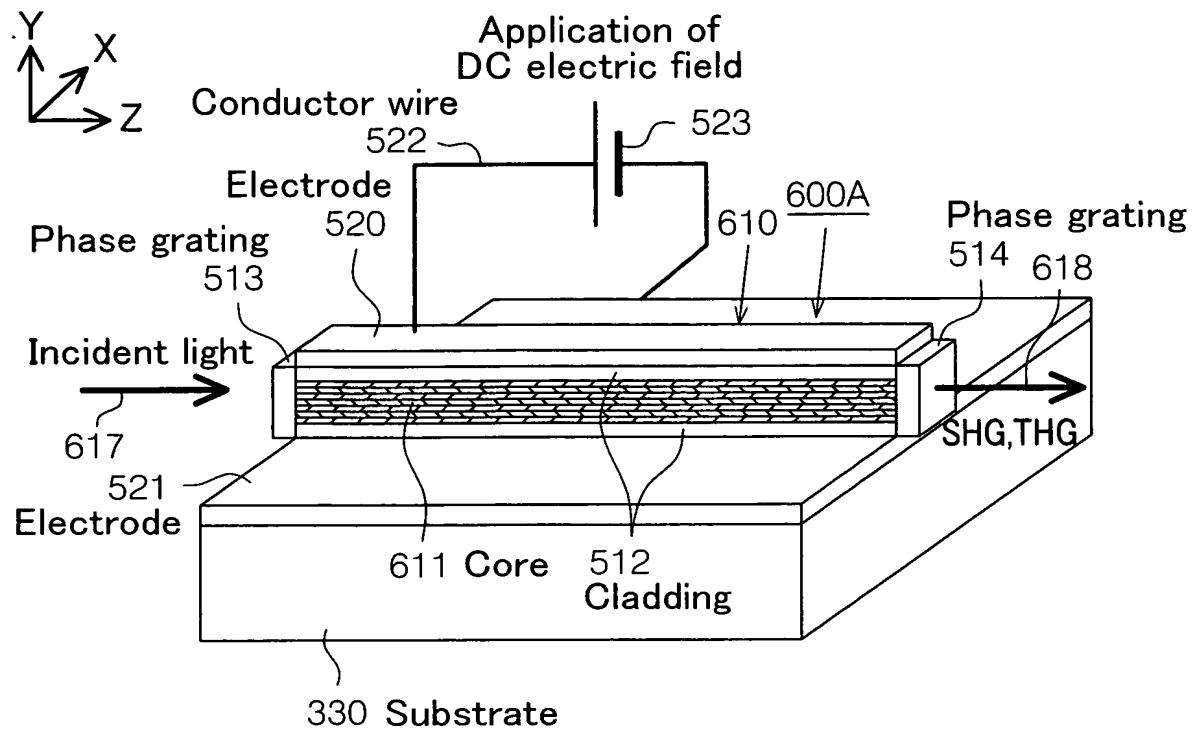


Fig.71

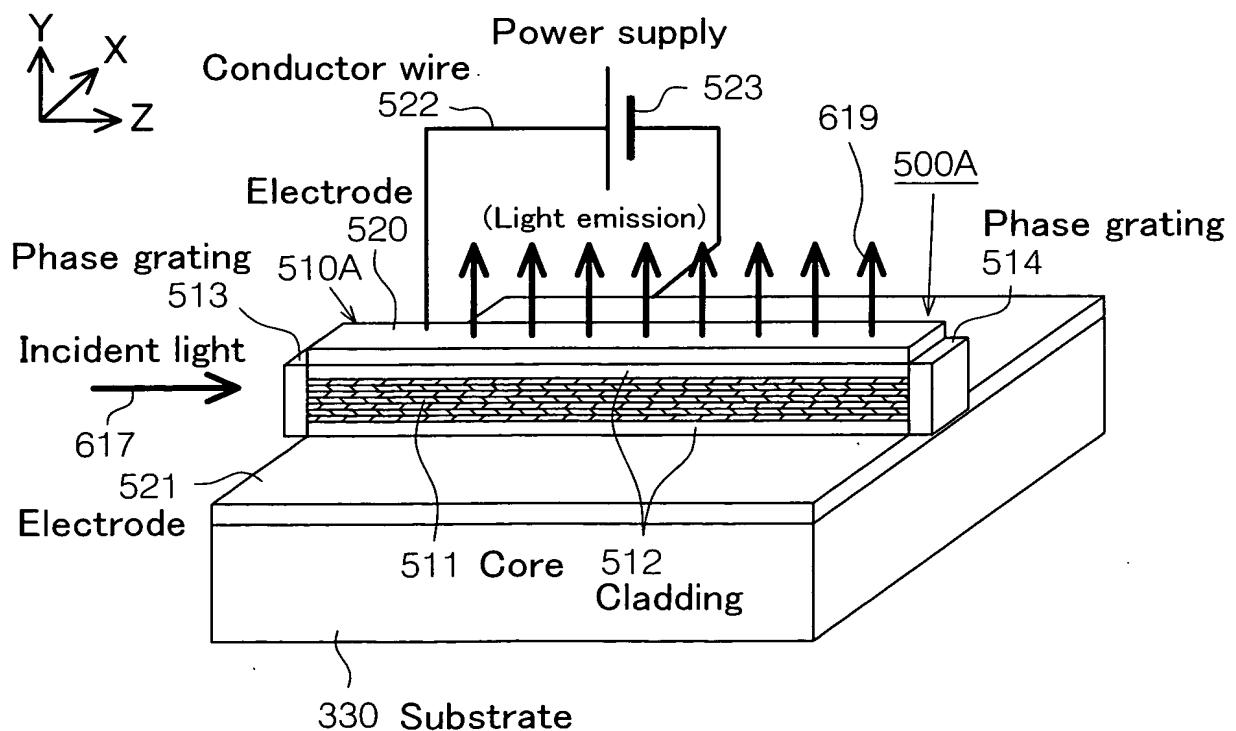


Fig.72

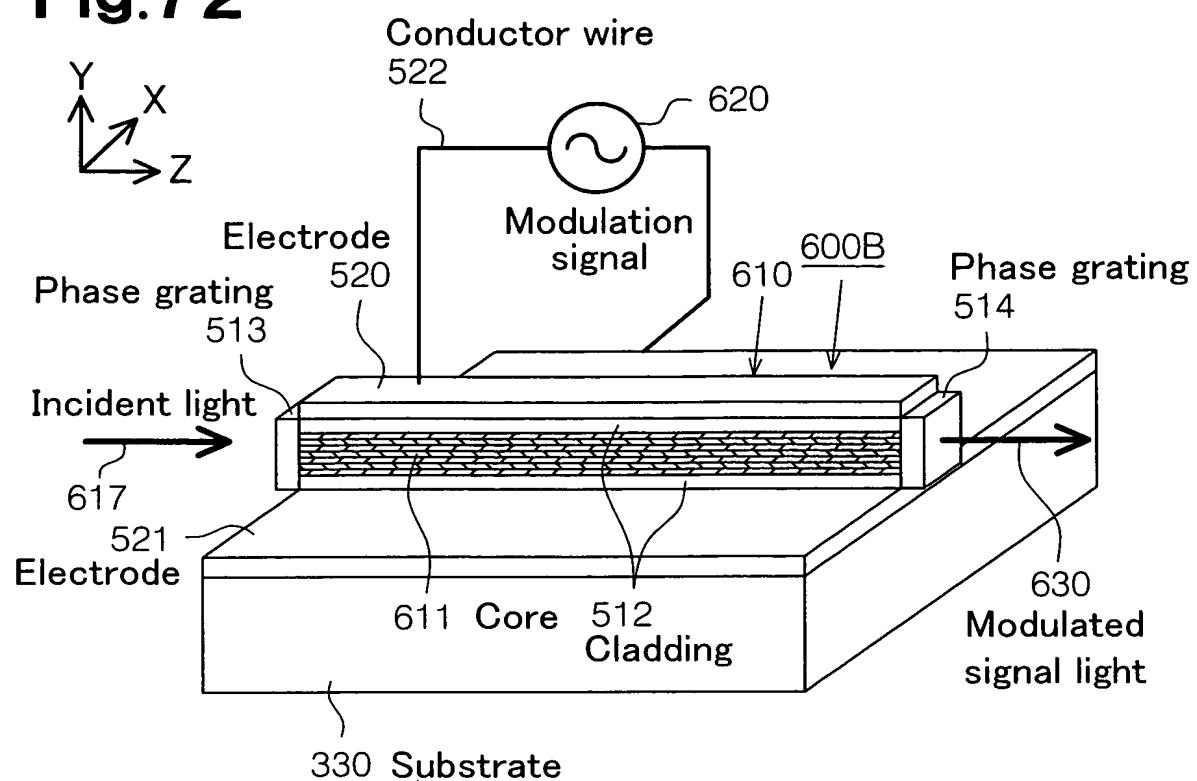


Fig. 73(a)

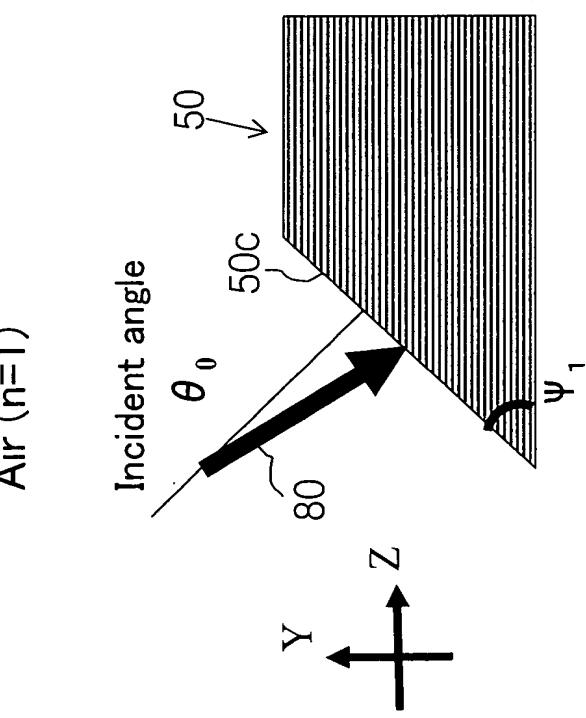
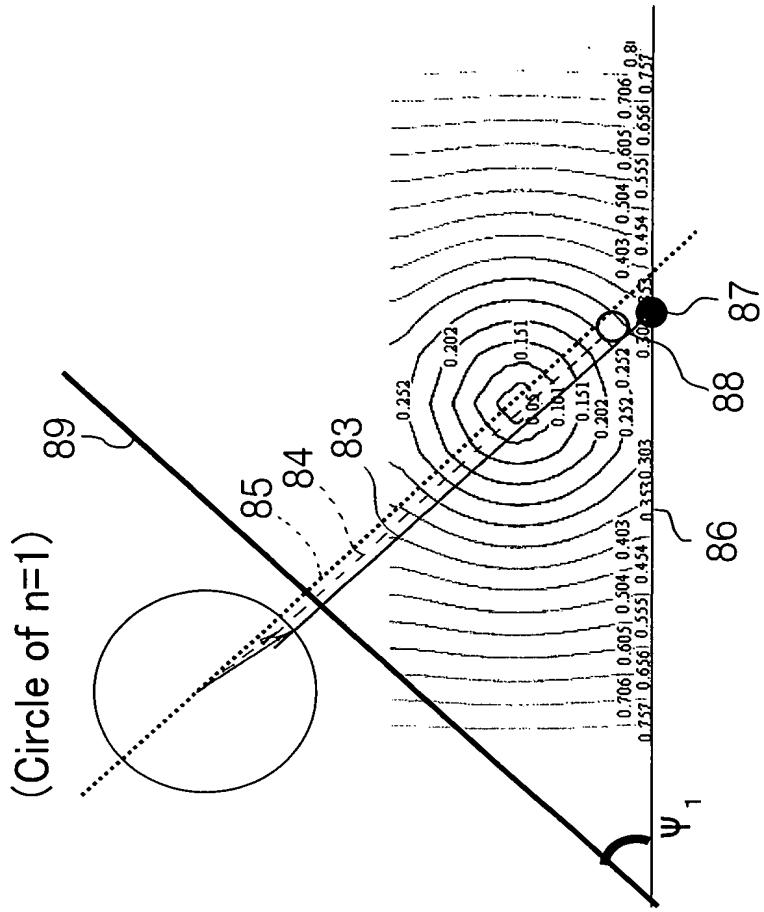


Fig. 73(b)



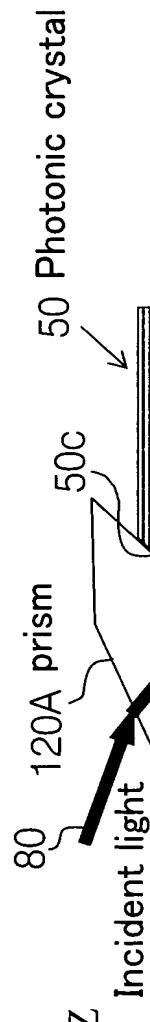
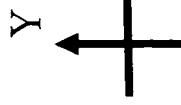


Fig. 74 (a)



Fig. 74 (b)

Fig. 74 (e)

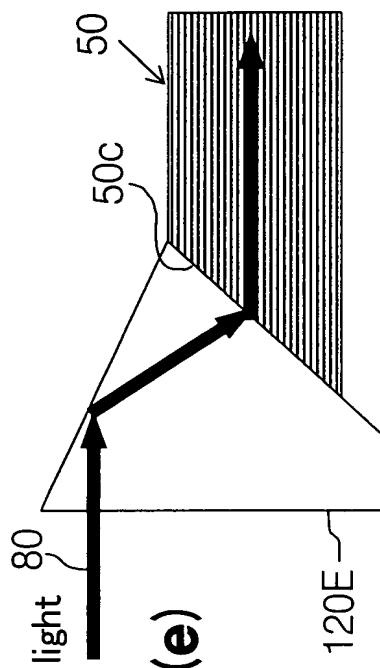


Fig. 74 (d)

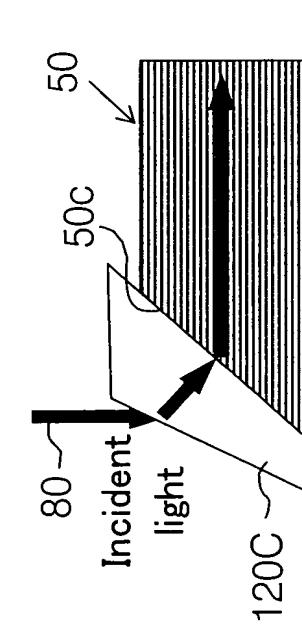


Fig. 74 (c)

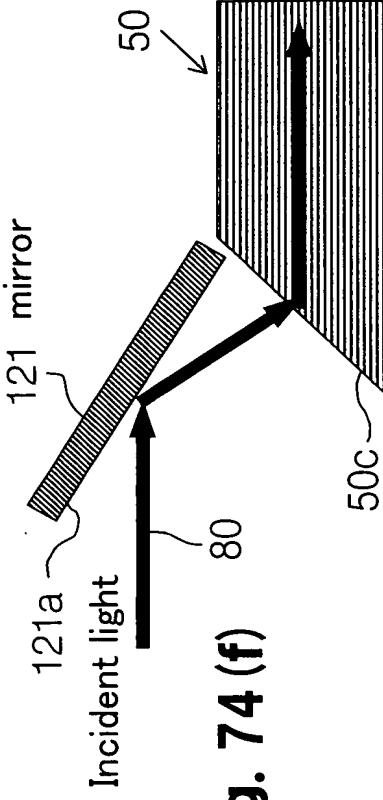


Fig. 74 (f)

Fig. 75(b)

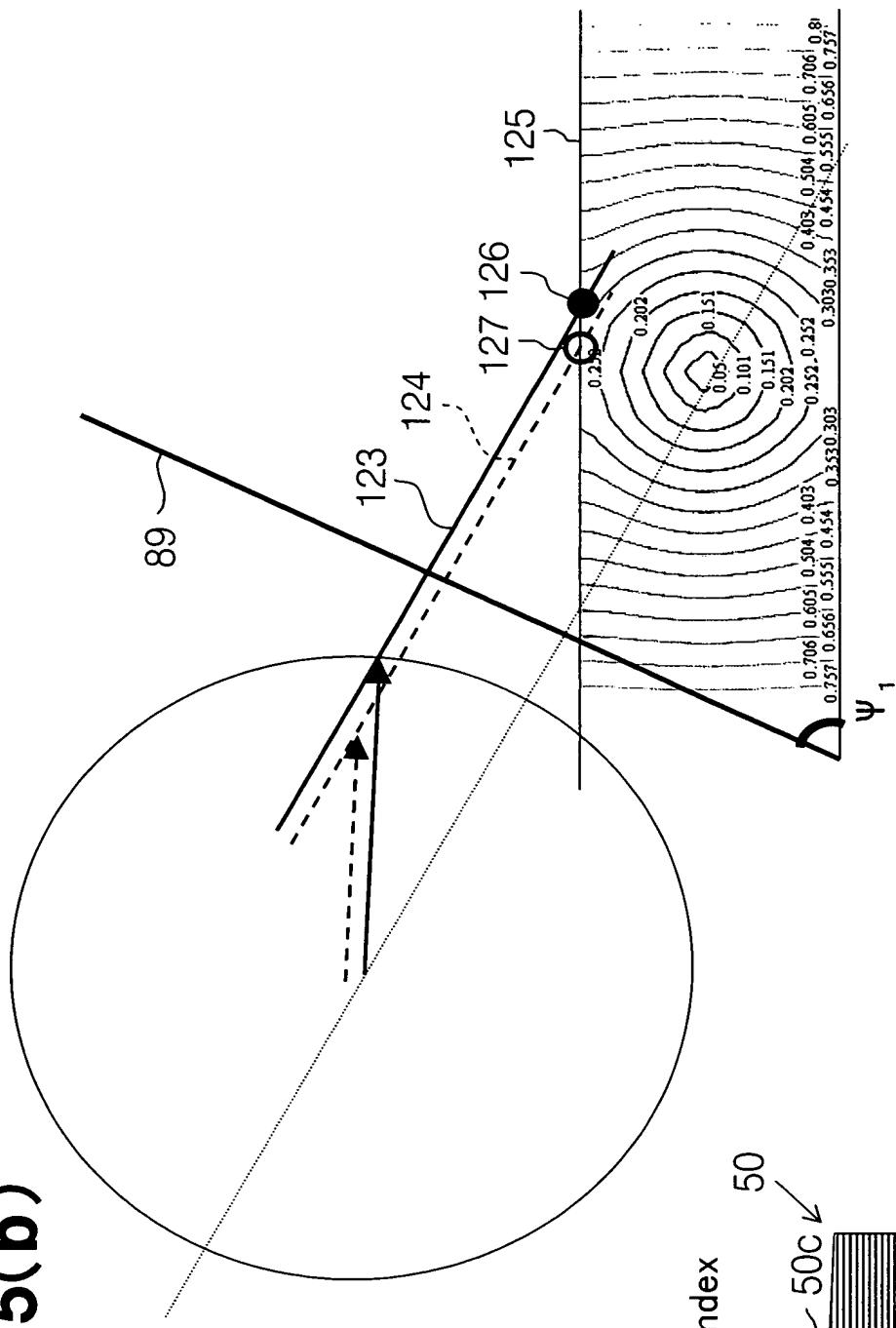


Fig. 75(a)

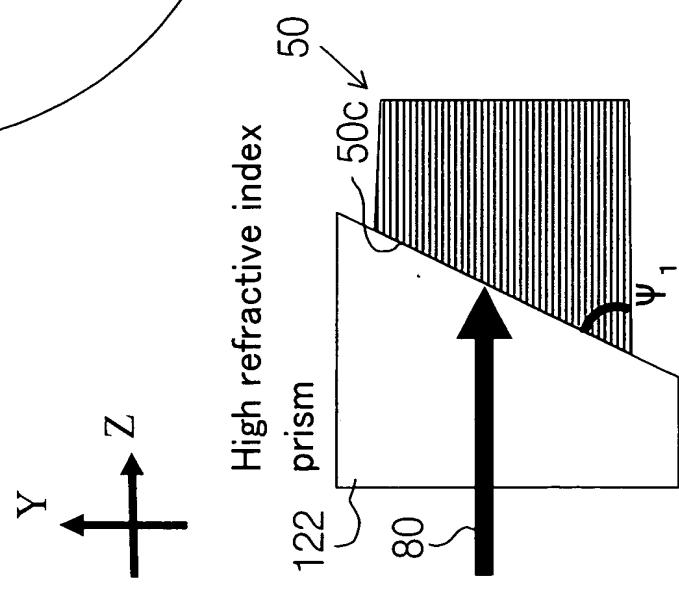


Fig. 76(a)

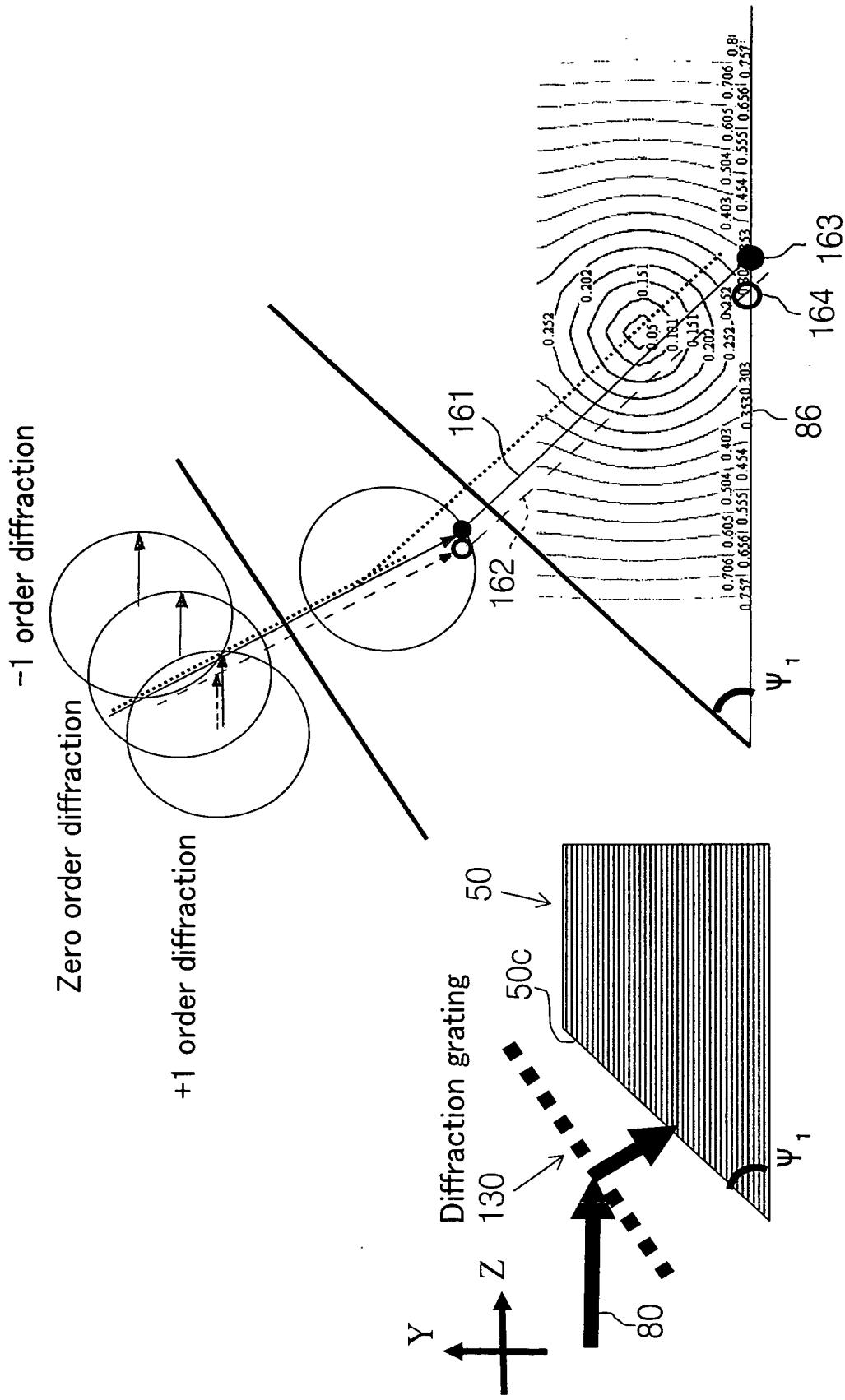


Fig. 76(b)

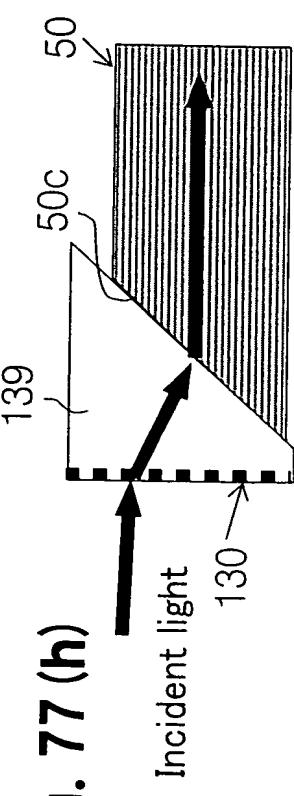
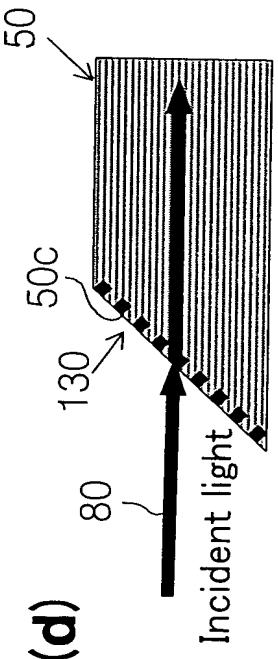
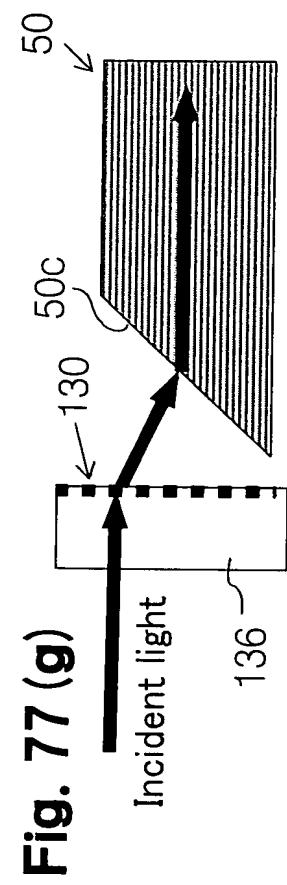
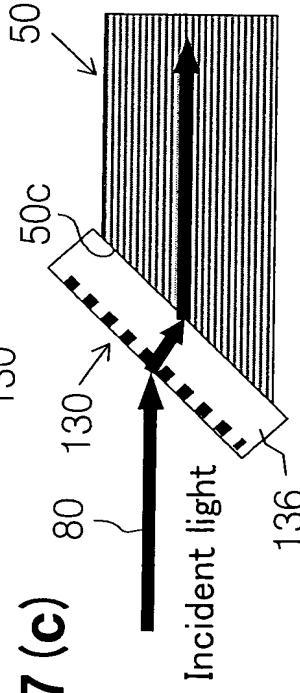
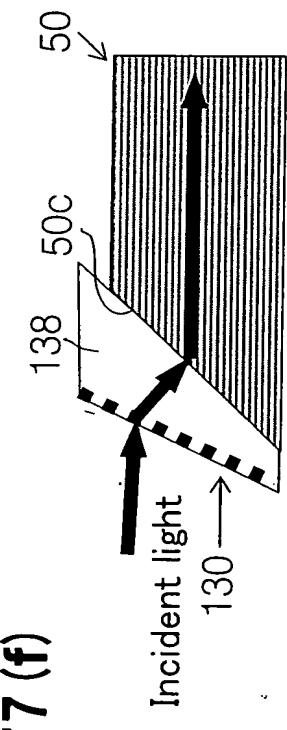
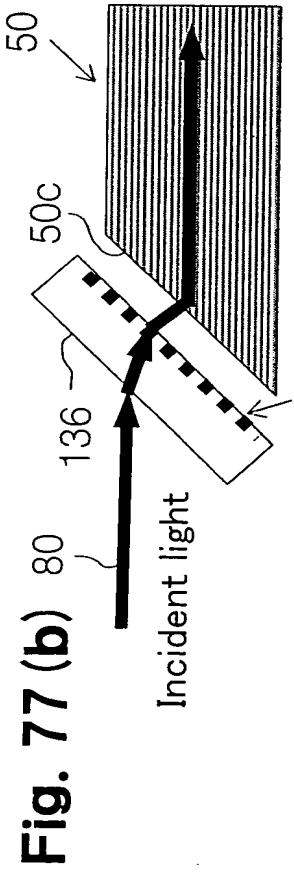
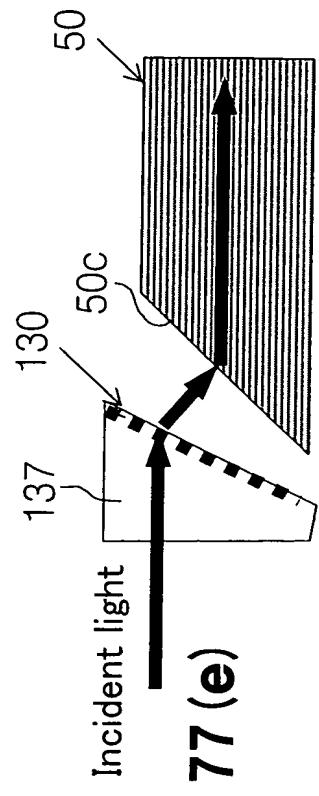
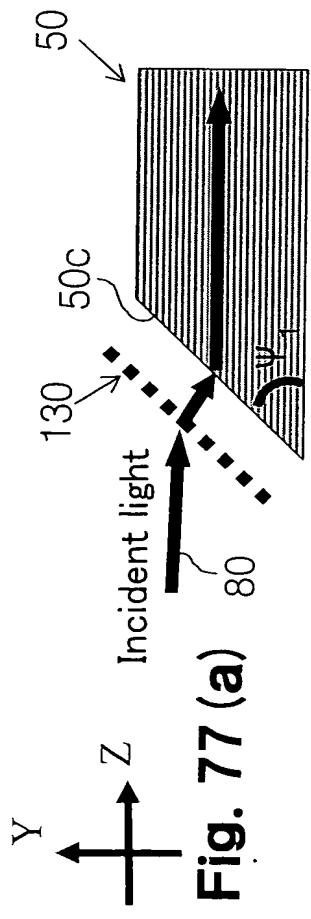


Fig. 78(b)

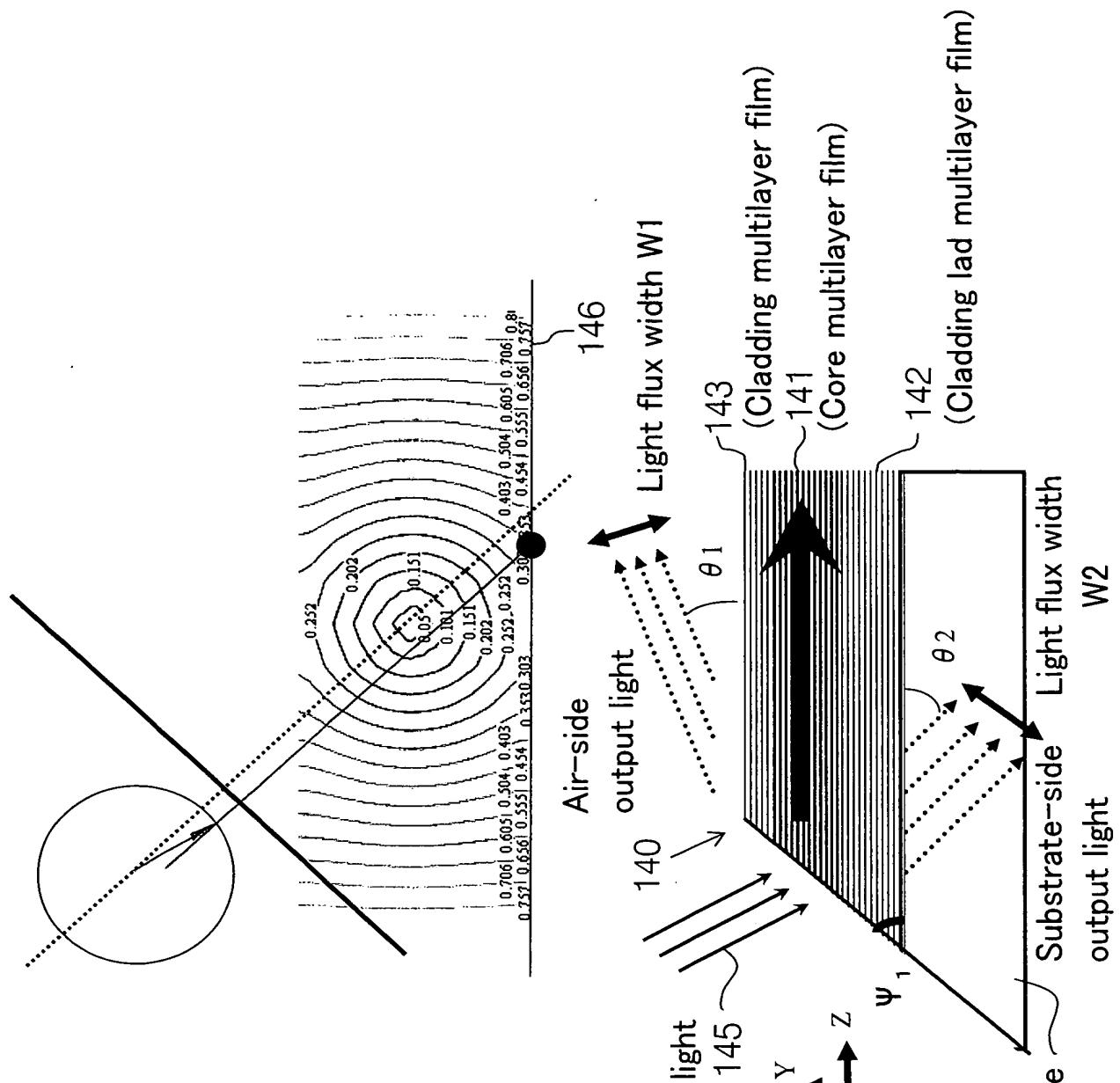


Fig. 78(a)

Fig. 79(a)

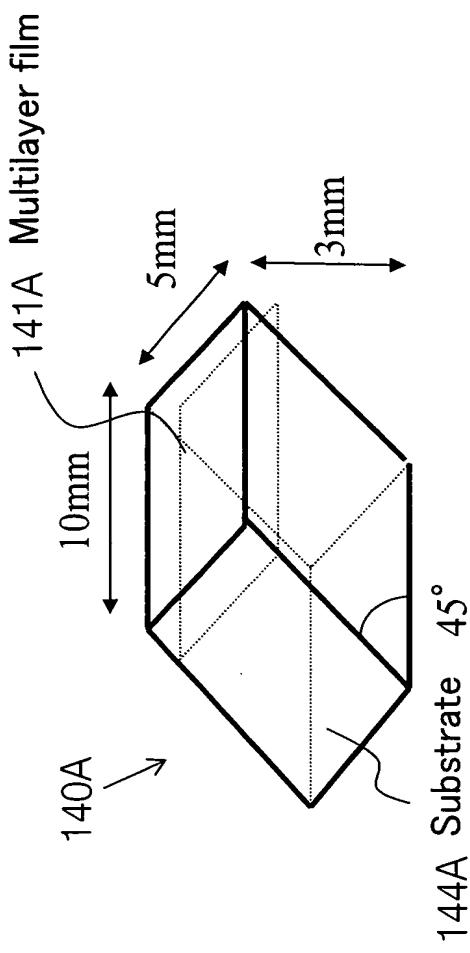


Fig. 79(b)

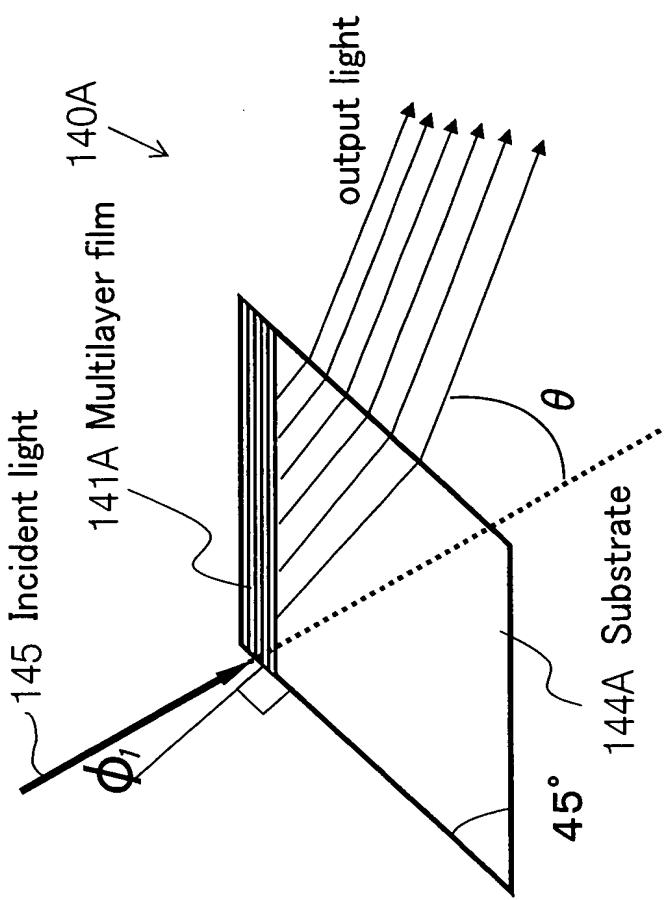


Fig. 80

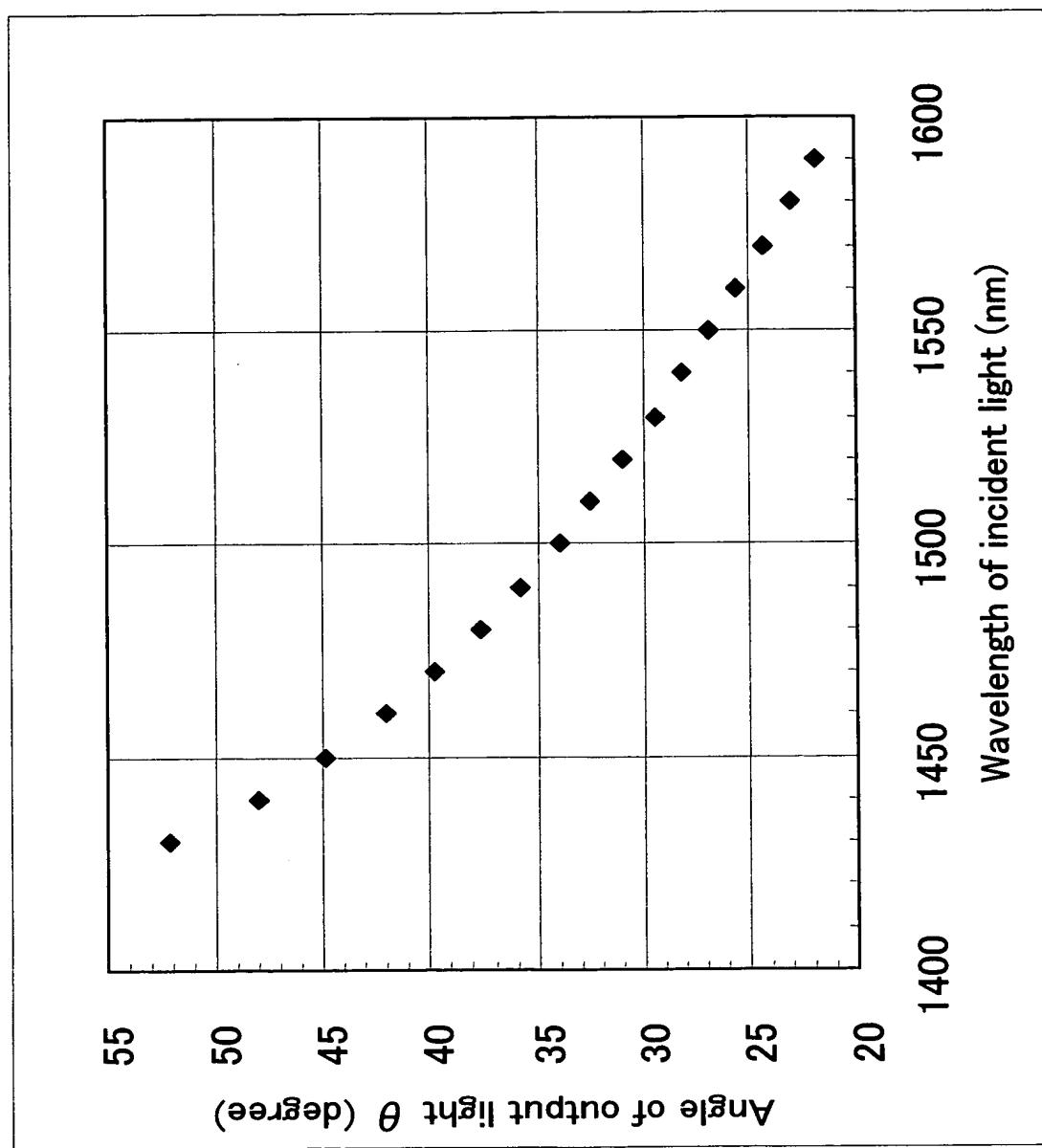


Fig. 81(a)

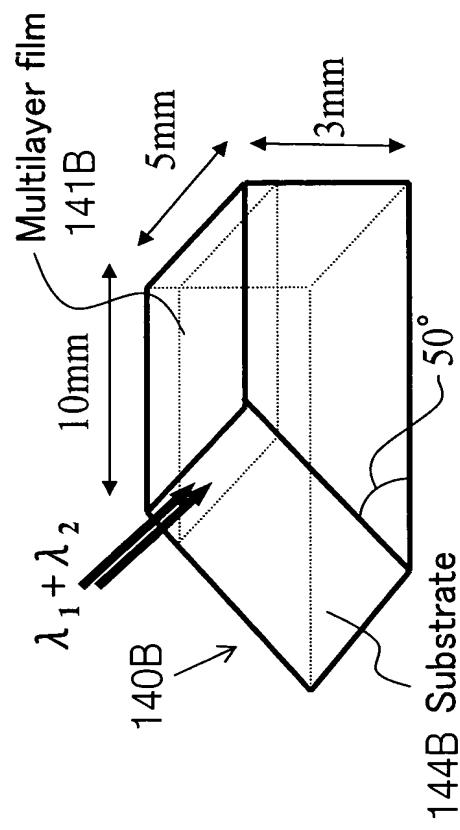


Fig. 81(b)

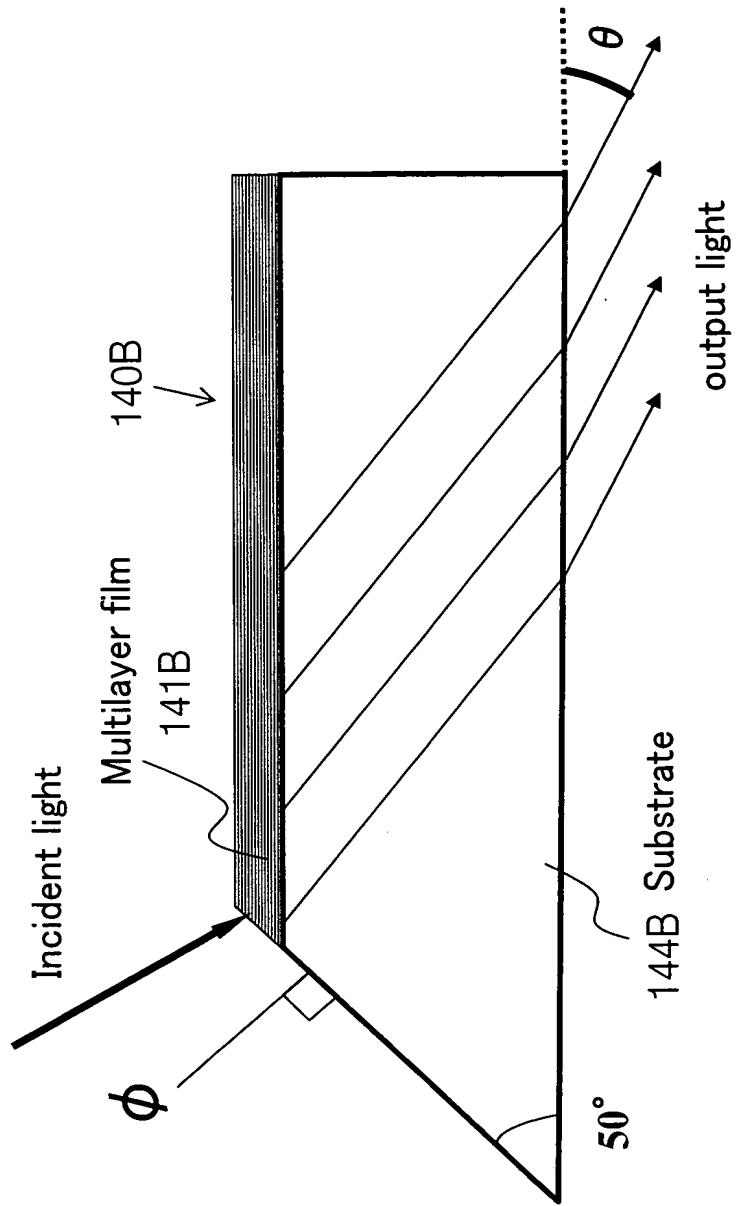


Fig. 82

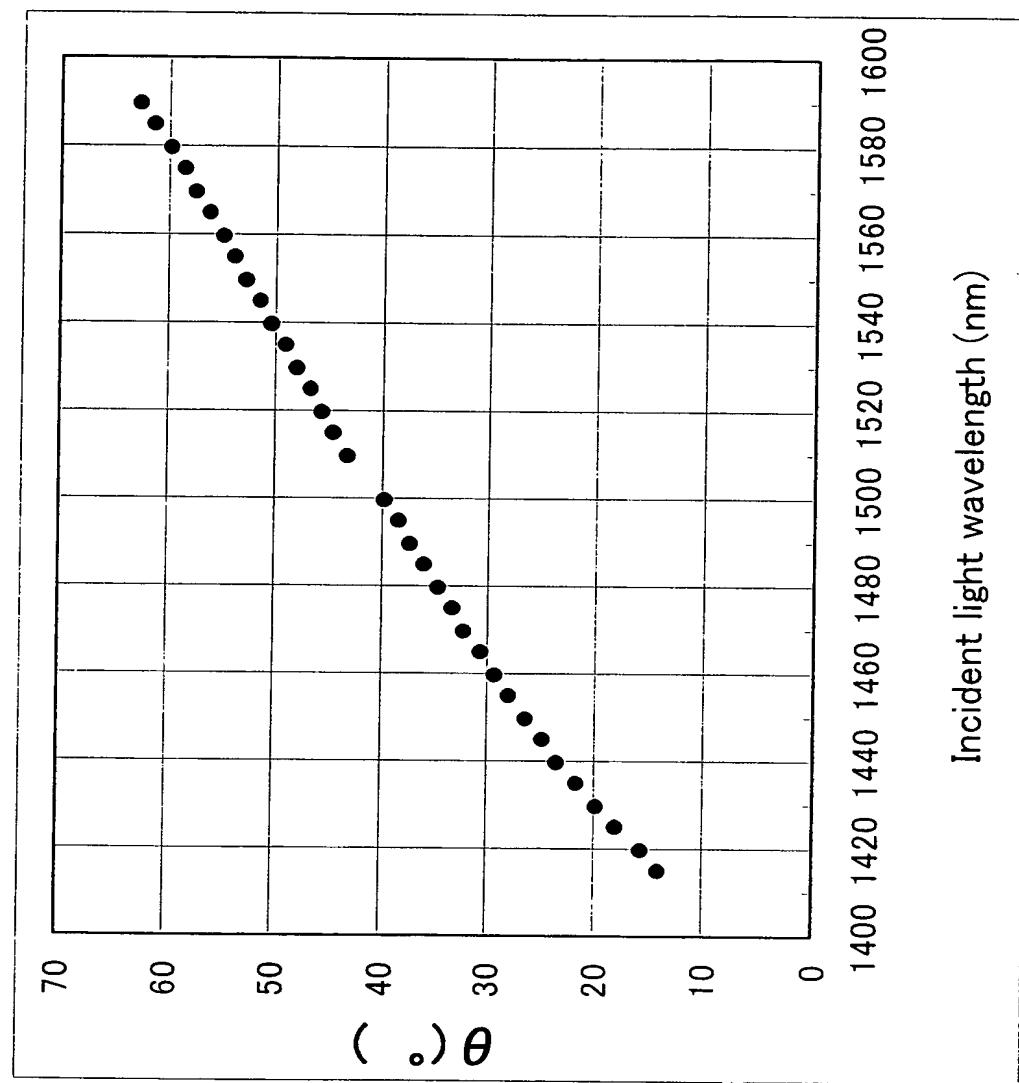


Fig. 83

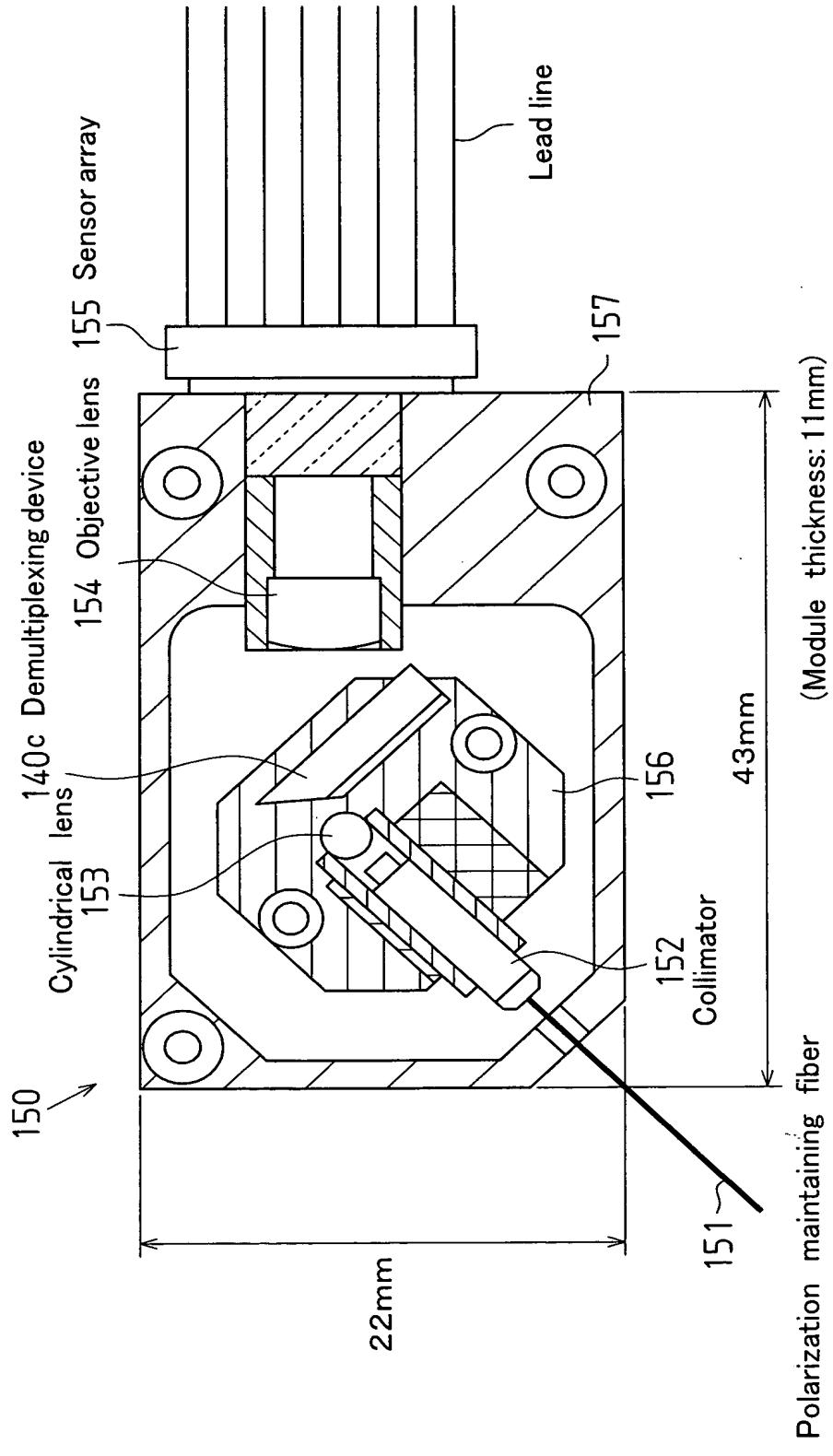
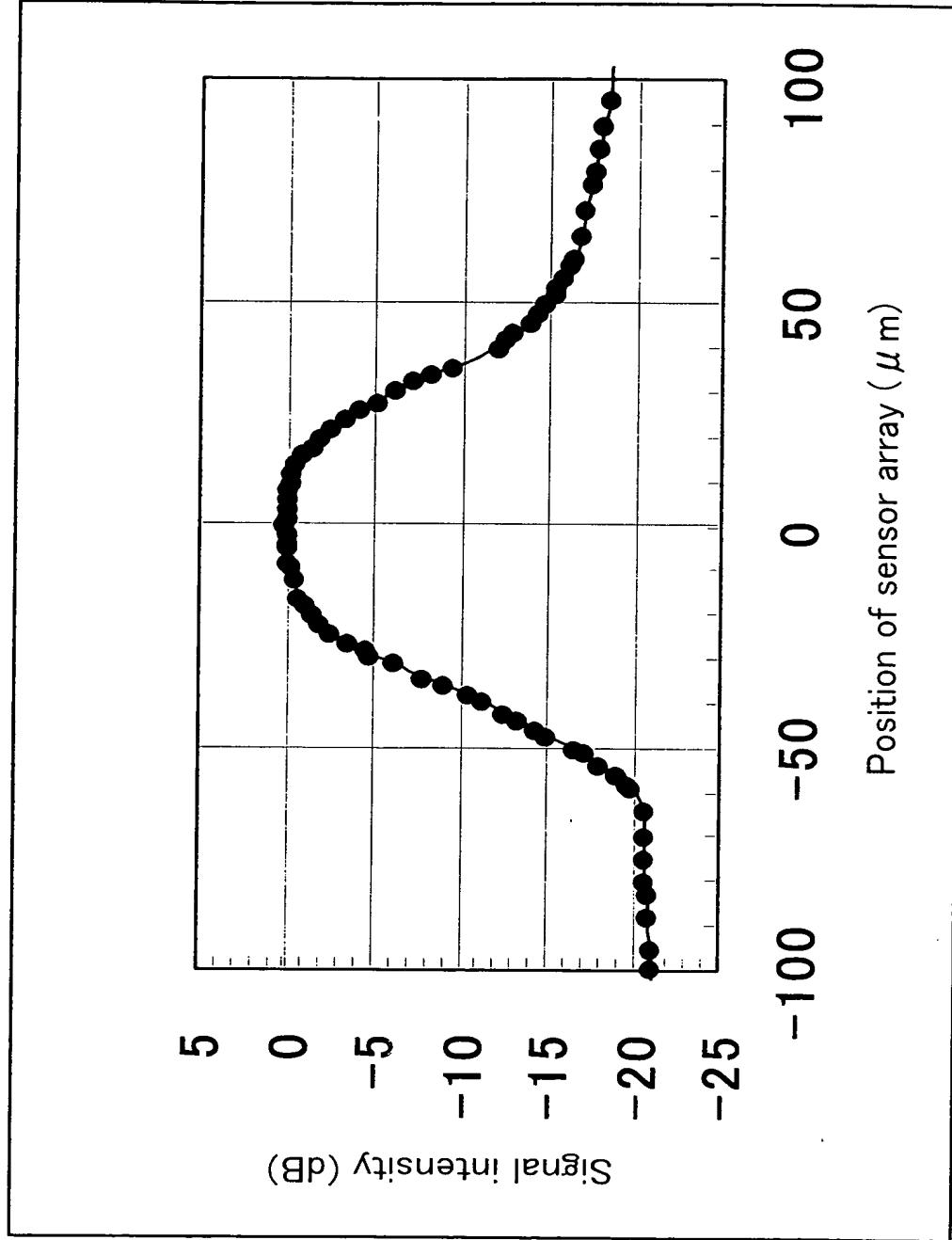


Fig. 84



**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.